Generic Environmental Impact Statement

Air Force Low Altitude Flying Operations

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January 1990
Volume II

EIAP Guide for Low Altitude Airspace Proposals

Air Force
Environmental Planning Division
(HQ USAF/CEVP)

Room 5B269
1260 Air Force Pentagon
Washington, DC 20330-1260

16 JUL 93

MEMORANDUM FOR DTIC (Acquisitions)
(ATTN: Matt Mauby)

SUBJ: Distribution of USAF Planning Documents Forwarded on 1 July 93

ALL the documents forwarded to your organization on the subject date should be considered Approved for Public Release, Distribution is unlimited (Distribution statement A).

Jack Bush, GM-14

Mr. Jack Bush
Special Projects and Plans
703-697-2928
DSN 227-2928

VOLUME II

EIAP GUIDE FOR LOW ALTITUDE AIRSPACE PROPOSALS

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LIST OF ACRONYMNS

AF REP	Air Force Representative
AFB	Air Force Base
AFLC	Air Force Logistics Command
AFR	Air Force Regulation
AFRCE	Air Force Regional Civil Engineer
AFRES	Air Force Reserve
AFSC	Air Force Systems Command
AGL	Above Ground Level
ANG	Air National Guard
ARTCC	Air Route Traffic Control Center
ATC	Air Training Command
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CDFG	California Department of Fish and Game
CEQ	Council on Environmental Quality
CVD	Cardiovascular *Disease*
dB	Decibel
dBA	Decibel based on A-weighted sound level
DNR	Department of Natural Resources
DOPAA	Description of Proposed Action and Alternatives
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPF	Environmental Planning Function
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
FONSI	Finding of No Significant Impact
FR	Federal Register
GEIS	Generic Environmental Impact Statement
HQ USAF/LEEV	Air Force Directorate of Engineering and Services, Environmental Division
IICEP	Interagency/Intergovernmental Coordination for Environmental Planning
IFR	Instrument Flight Rules
IR	Instrument Route
KIAS	Knots Indicated Air Speed

LANTIRN	Low Altitude Navigation and Targeting Infrared for Night
LATN	Low Altitude Tactical Navigation Area
Ldn	Day - Night Noise level
MAC	Military Airlift Command
MAJCOM	Major Command
MOA	Military Operations Area
MPH	Miles Per Hour
MSL	Mean Sea Level
MTR	Military Training Route
NAAQS	National Ambient Air Quality Standards
NDW	Nevada Department of Wildlife
NEPA	National Environmental Policy act
NFS	National Forest Service
NOI	Notice of Intent
NPS	National Park Service
NWR	National Wildlife Refuge
PSD	Prevention of Significant Deterioration
RA	Restricted Area
ROD	Record of Decision
SAC	Strategic Air Command
SAS	Statistical Analysis System
SEL	Sound Exposure Level
SR	Slow Route
STRC	Strategic Training Range Complex
T&E	Threatened and Endangered
TAC	Tactical Air Command
TSP	Total Suspended Particulate Matter
USAF	United States Air Force
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VFR	Visual Flight Rules
VR	Visual Route

INTRODUCTION

INTRODUCTION

This Guidance Manual is intended to assist the environmental planner and/or the airspace manager in preparing appropriate environmental compliance documentation for low altitude airspace use proposals. These proposals deal with establishing new airspace, changing the mission in preestablished airspace, and in some instances revoking airspace. It will describe briefly why such documentation is required, what the required procedures and documents are, what to focus the analytical process on, and who to contact so that adequate environmental documentation can be prepared.

AIRSPACE MANAGEMENT

AIRSPACE MANAGEMENT

The National Environmental Policy Act (NEPA) of 1969 requires all agencies of the Federal government to utilize a systematic, interdisciplinary approach which will ensure the integrated use of natural and social sciences and the environmental design arts in planning and decisionmaking which may have an impact on man's environment. Findings from the Environmental Impact Analysis Process (EIAP) are used in the decisionmaking process for airspace actions which support new/changed missions; furthermore, mitigating measures may be required for significant environmental impacts.

Airspace is a finite resource which is never "used up" but which needs to be managed for safe and efficient use...

Airspace is a finite and essential resource required by the Department of Defense to successfully accomplish the operational, training, research development, testing and evaluation missions assigned to individual commanders. Military users compete with civilian and commercial users for limited navigable resources. Overall control of airspace use is the responsibility of the Federal Aviation Administration (FAA). Day to day airspace designation, design, and management is delegated through the FAA to the military. Aggressive airspace management programs are necessary to provide an airspace environment in which US Air Force missions can be conducted as realistically as possible while minimizing impact on other airspace users.

In a recent study, the Government Accounting Office (GAO) recommended that the FAA better account for airspace designated for military use (GAO/RCED-88-147). The GAO also recommended the FAA certify NEPA documentation that accompany airspace proposals. The Council on Environmental Quality (CEQ) has stated that FAA has ultimate NEPA responsibility for airspace proposals, and must approve the sufficiency of NEPA documentation. For most DOD airspace actions, the FAA is considered a "cooperating" agency.

Aircraft accidents and noise disturbance incidents in Europe have resulted in severe restrictions to low altitude training flights. At the same time, technological advances in weapon

and detection systems require aircraft to fly lower and faster to survive combat. The required training for this lower, faster flying must shift to CONUS if we are to remain combat ready. Public opposition at home can be anticipated in reaction to increased low level flight activities.

Challenges to the EIAP invariably deal with sufficiency or comprehensiveness of the EIAP document itself rather than our decision to proceed with the airspace action...

The Environmental Impact Analysis Process (EIAP) is open to intense public scrutiny. Challenges to the EIAP invariably deal with sufficiency or comprehensiveness of the EIAP document itself rather than our decision to proceed with the airspace action. The document must be understandable to the public-at-large. Done poorly, it can damage or delay a proposed program. Done well, the EIAP documentation can enhance the credibility of the proposed Air Force action. This guide will demonstrate how to produce good airspace environmental documentation.

Recognizing the utility of a consistent, nationwide analysis of low altitude flight operations and their impacts, the Air Force initiated a "Generic" EIS (GEIS) in September, 1986. Public scoping revealed a number of concerns about low altitude flight operations. These concerns were consolidated into ten "resource" categories. Although there are regional and airspace use differences, these ten resources are considered representative of the affected environment beneath low level flight activities. These resources are:

- Airspace
- Social
- Noise
- American Indians
- Structures
- Wilderness and Parks
- Wildlife
- Livestock and Poultry
- Air Quality
- Health and Safety

Acquisition of new airspace is similar to the acquisition procedure for any other resource. The requirement is identified and the availability of existing resources to satisfy the specific requirement is determined. If no existing resources are suitable, you define and propose the acquisition. You then present the proposal with comparative analysis including NEPA documentation to the decisionmaker. Approval of the airspace is ultimately accomplished by the FAA.

Existing airspace resources are evaluated to meet the requirement before new airspace is acquired.

The Air Force conducts training and testing operations which generate the airspace requirement. The training requirement is identified in terms of mission, i.e., air-to-air combat, air-to-ground attack, etc. It is also dependent upon required proficiency levels, in which a "building block" approach is used to define realistic training profiles. These, in turn, drive the airspace access required for the number of pilots to achieve and maintain the required proficiency.

With the training requirements identified, the next step is to assess the availability and accessibility of existing airspace resources. Only when existing airspace is inadequate or inaccessible is the requirement for new airspace identified.

The new airspace proposal is then 'designed' to meet new or enhanced mission requirements. The design of an airspace proposal is responsive to the criteria of the proponent, e.g., be within an economical radius of the launch/recovery base(s), deconflict from all other airspace users, ensure an equivalent level of safety, and avoid congested areas and environmentally sensitive locations. These criteria may be explicit, or they may be implicit and seem as simple as common sense. In either case, when it is presented, the proposal will reflect a remarkable responsiveness to the design criteria.

In assessing and designing airspace, the airspace manager uses a variety of aeronautical information sources that include VFR Sectionals, VFR/IFR wall planning charts, and Flight Information Publications (FLIPs) - Low Altitude Enroute charts, AP 1A and 1B, and ARTCC sectorization maps. He has also coordinated with key FAA Air Traffic Control Facilities to

minimize the impact of planned operations on the other users in the National Airspace System.

As soon as an airspace solution is tentatively identified, a NEPA compliance process is initiated. The environmental process begins with a completed AF Form 813, Request for Environmental Impact Analysis, to the Environmental Planning Function (EPF). It is this AF Form 813 that triggers the entire process discussed at length in this Guide.

The airspace manager and the environmental planner should consult as early as possible in the airspace acquisition process. Specifically, the design of the airspace proposal can be enhanced by incorporation of environmental considerations into the design criteria. Additionally, the environmental planner can, through preliminary coordination and consultation, help avoid sensitive locations or practices before they go public.

. . .the design of the airspace proposal can be enhanced by incorporation of environmental considerations

Once the airspace proposal and EIAP documentation have been completed, the AFREP submits them to the FAA Region for final FAA processing and eventual publication and charting through the Defense Mapping Agency Aeronautical Center (DMAAC). If a proposal would increase the burden on the public or appears controversial, the FAA Region or Headquarters may circulate the proposal to the public for comment. This is usually the case for "rule-making" Special Use Airspace (SUA), particularly restricted ares (RAs) which are always published in the Federal Register. Rule-making is simply the FAA's designation of airspace by rule, regulation, or order. The process involves formal public hearings and decision making with the rule published in the Federal Register. "Non rule-making" SUA proposals such as Military Operations Areas (MOAs) are circulated at the FAA regional level. If necessary, the FAA Region may hold informal airspace meetings, usually for SUA proposals, to address public comment. There is no provision for circulating MTR proposals or holding informal meetings.

Refer to Appendix A, "EVOLUTION OF AN AIRSPACE PROPOSAL," for specific details on airspace development procedures and responsibilities..

NEPA COMPLIANCE

NEPA COMPLIANCE

The National Environmental Policy Act (NEPA) was passed by Congress in 1969 and it took effect on January 1, 1970. This law is one of the first and most significant pieces of environmental legislation enacted in the United States. The law opens up federal agency decisionmaking processes to involvement by state and local governments, and other concerned public and private organizations. Implementing regulations of NEPA were developed by the Council on Environmental Quality (CEQ).

The intent of NEPA is to require federal agencies to "take a hard look" at the potential environmental consequences of their proposals. According to CEQ, this "hard look" at both good and bad consequences, was to take place "early in the planning process." When one thinks about that intent, NEPA is a useful tool for the decisionmaker. Based upon past experience, we know that NEPA compliance is not only required by law but is also morally and ethically responsible.

The intent of NEPA is to require federal agencies to "take a hard look" at the potential environmental consequences of their proposals.

According to CEQ 1500.1, NEPA's purpose is not to generate paperwork--even excellent paperwork--but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.

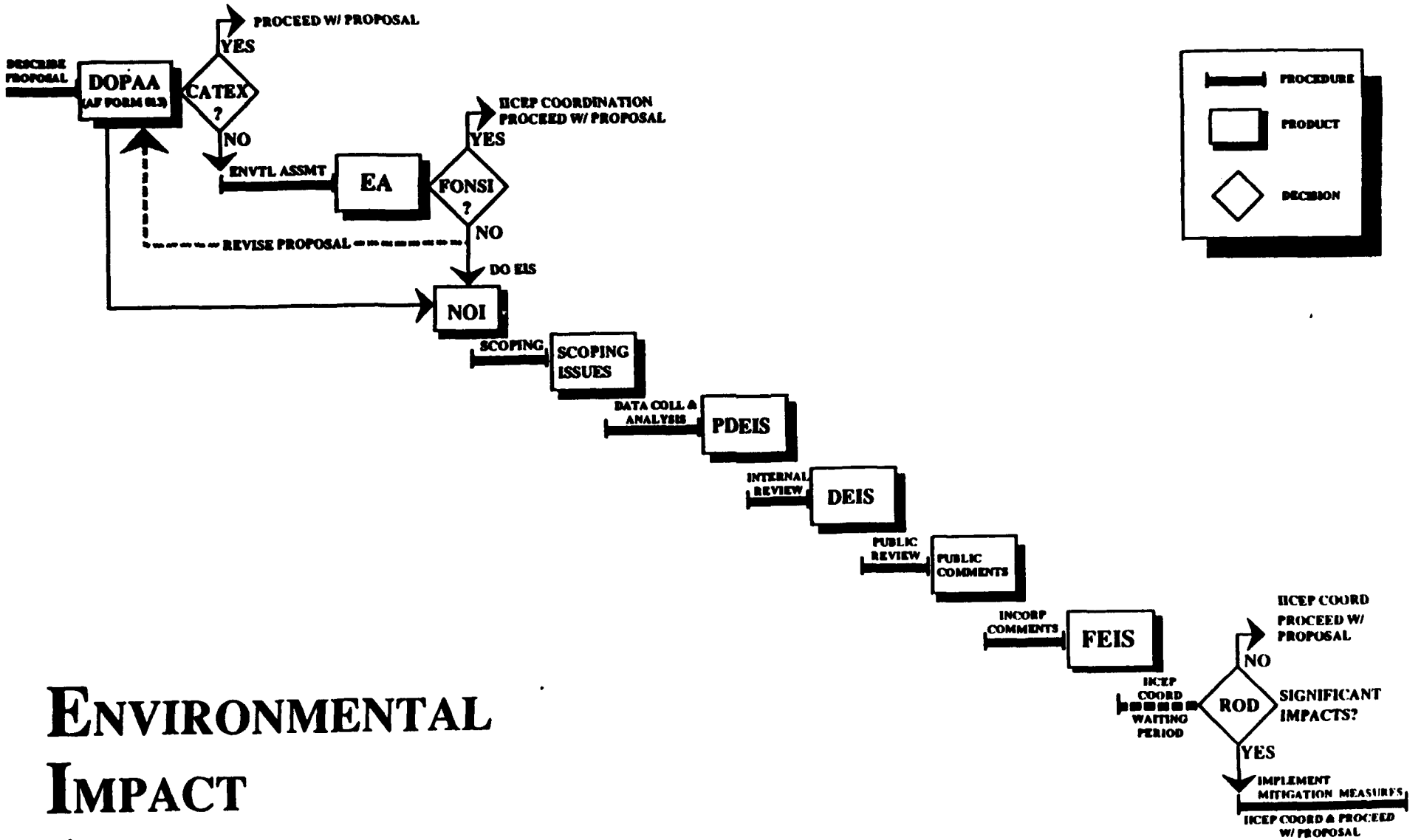
The Air Force's policy on NEPA compliance is contained within AFR 19-2, the Environmental Impact Analysis Process (EIAP). Each proposed action must end in one of the following four conclusions:

- Categorical Exclusion (CATEX)
- Environmental Assessment (EA) with Finding of No Significant Impact (FONSI)
- Environmental Impact Statement (EIS) with Record of Decision (ROD)
- Decision to take no action

The usual process is to initially determine whether the action qualifies for a CATEX in accordance with AFR 19-2. If the action does not qualify for a CATEX, an EA is accomplished. The EA can result in a FONSI, a decision to prepare an EIS, or a determination to take no action. Even though NEPA is the "basic national charter for protection of the environment" (40CFR1500.1) it does not require that federal agencies make their decisions wholly based on environmental impacts and factors. If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other issues outweigh the environmental impacts.

Essentially, then, we can say that NEPA compliance is driven by the need to be proactive from legal and ethical perspectives and, in terms of keeping our mission on track by identifying and eliminating potential "showstoppers."

PROCEDURES AND PRODUCTS



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

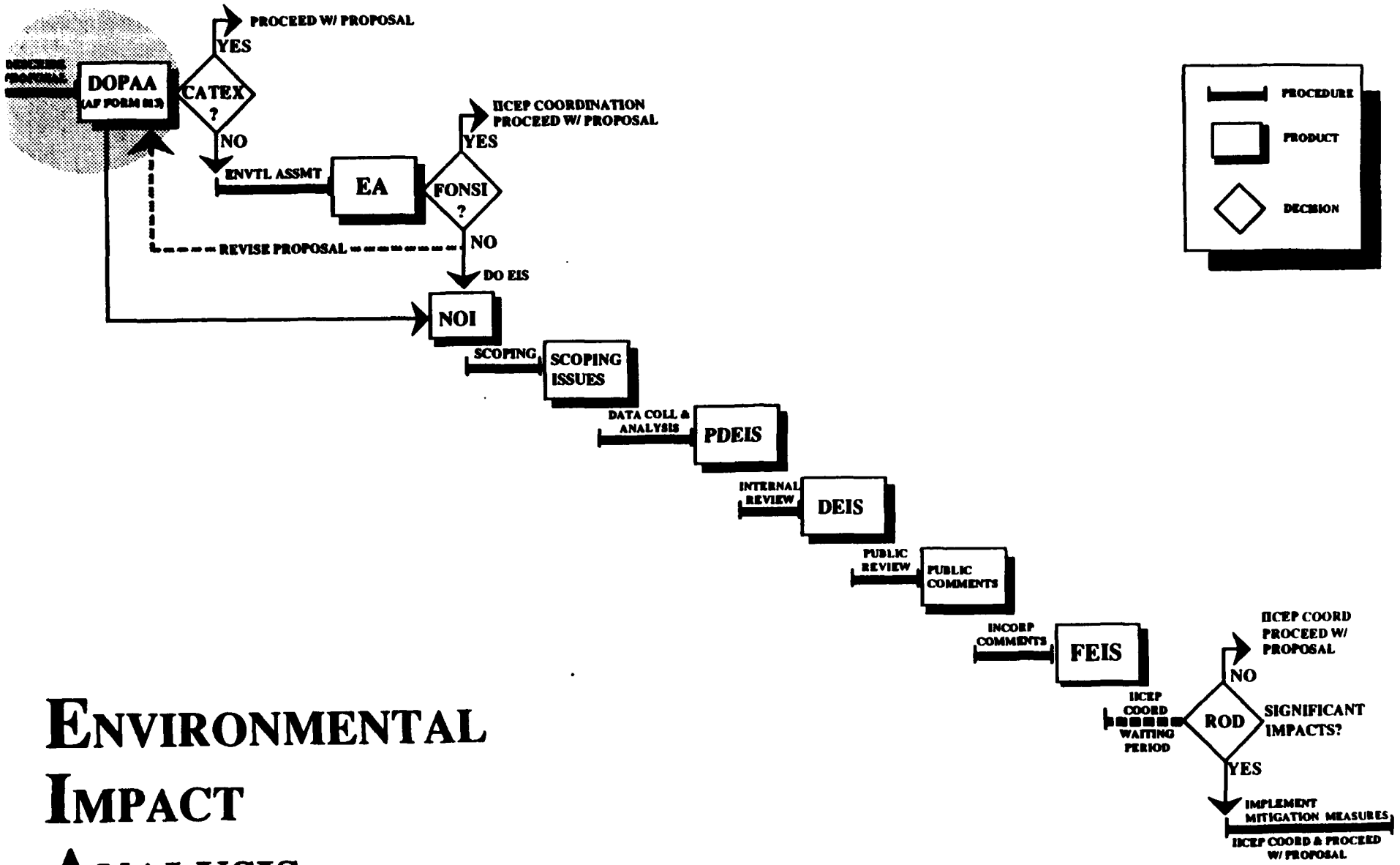
PROCEDURES & PRODUCTS

PROCEDURES AND PRODUCTS

Introduction

The National Environmental Policy Act (NEPA) is essentially a planning tool for decisionmakers to make knowledgeable decisions. The legislators designed the action forcing mechanisms of NEPA to be procedural and product oriented. Federal agencies are urged to be environmentally responsible (a policy), but they are directed to submit a "detailed statement" (a product). In the course of developing this detailed statement, they are also directed to use specific procedures to incorporate and respond to public comments on the proposal.

The test for successful environmental support is timely submittal of the appropriate document(s) so the proposal is not delayed due to environmental procedural requirements. In this section you will learn which documents to use and when they are used, the required format and content of each document, and the logical relationship among documents and procedures.



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

DOPAA

Description of Proposal

This is the logical first step. A Description of the Proposed Action and Alternatives (DOPAA) initiates the EIAP and is the product that informs affected agencies and provides the basis for all further analysis. All airspace actions require a DOPAA regardless of the level of assessment (CATEX, EA, or EIS).

If an EIS is required, the DOPAA plus a schedule of scoping plan is forwarded to HQ USAF/LEEV for their review, coordination, and submission into the Federal Register. It must be submitted 30 days prior to the first scoping meeting. A draft Notice of Intent (NOI) is included in the scoping plan.

If an EA is required, the DOPAA should be used as the transmittal document for Interagency/Intergovernmental Coordination for Environmental Planning (IICEP). IICEP is the formal procedure under E.O. 12372 which requires review by state, local, and federal agencies of any action. This procedure may be accomplished by the unit, the MAJCOM, or the AFRCE. You should follow guidance given to you by your MAJCOM. Ensure potentially affected organizations (i.e. public affairs and staff judge advocate) are aware of the proposal and execution of the IICEP process. Further information on IICEP can be found in the Relations and Durations section.

Prior to the DOPAA finalization, it is a very good idea to informally call or personally contact local, state, or federal agencies that would have an interest in your action. This informal contact will allow you to determine what the incoming objections are and where they will originate from. It also establishes a starting point in a working relationship.

Contact agencies early to establish a working relationship and determine the controversial issues

The DOPAA

The proponent of the action is responsible for preparing the DOPAA. The EPF can assist in preparing the DOPAA by providing information and exploring and expanding the number of alternatives that are considered reasonably feasible. The

DOPAA is submitted via AF Form 813, Request for Environmental Impact Analysis process.

The proposed action should include a good description of the activities to be conducted (e.g. development of a new Military Training Route (MTR), Military Operations Area (MOA), Restricted Airspace (RA), aircraft conversion, route/range/MOA expansion, lowering the floor/ceiling to an existing MOA, etc.). This description should include:

1) Area of Flight Activities

- Type of airspace needed (MOA, MTR, RA, etc.) and where it is located. Attach clear, legible maps and AF Form 7410-4 to identify the coordinates of the airspace;
- The floor, ceiling and boundaries of the required airspace should be identified. You should also identify any known noise sensitive areas within the proposed boundaries to include areas of past complaint from the public;
- The types of aircraft that will use the airspace (to include other transient aircraft and aircraft from the Army, Navy, and Marine Corps if appropriate);

2) Categories of Flight Activities

- Type(s) of flight training to be conducted in the proposed airspace;
- Identify the requirement and frequency of training by flight level (altitude);
- Length of training activity;
- Identify/discuss any anticipated transient aircraft usages of the airspace.

3) Aircraft Operations

- Type of aircraft, number of sorties, frequency of use (maximum and minimum number for each day);

- Airspeeds, power settings (maximum and minimum) and duration in the area for each aircraft type for entire length of the airspace;

- Period of use of the airspace each day to include day and/ or night activities. Include the percentage of day/ night activity, broken down by aircraft type. Night missions are those flown between 2200 and 0700 hours;

- Weekend flight activity;

- Sorties broken out by aircraft type. If there is a racetrack or airspace configuration that requires a number of passes, identify the number of passes;

- Entry and exit points (including altitude of entry and exit) should be identified and labeled;

- Provide a schedule of activities to be conducted, including an attrition factor to show the "normal" number of activities that usually occur. For example, your proposed action is to fly ten B-52s per day, 50 per week. However, due to weather conditions, scheduling problems, operational/ mechanical problems, mission changes, only 40 B-52s will actually fly per week. It would be to the proponent's advantage to include this attrition rate in the analysis. Otherwise, a worst case estimate for the new airspace proposal may result in "significant" impacts. Also provide an annual sortie rate for the airspace proposal.

- Type and quantities of dropped/fired objects if the training training/test requirements define this. Objects may include weapons (missiles, bombs, or bullets, live or inert), flares, chaff, shapes, people, cargo, equipment, etc.

The alternatives to the proposed action portion should include selection criteria and comparison of all alternatives. The proposal and all the alternatives are evaluated against the criteria and need statement of the DOPAA

The alternatives to the proposed action portion should include selection criteria and comparison of all alternatives to include the "no action" alternative. The proposal and all the alternatives are evaluated against the criteria and need statement of the DOPAA. The selection criteria needs to specify the desired size of the airspace and distance from identified user base(s).

Special requirements such as land/water features, land based radar scoring sites, overflight restrictions, bombing range location, etc. should be identified. Comparison of all alternatives is not only crucial to the impact analysis, but is a firm requirement of NEPA. Alternatives which fail to meet the selection criteria are identified, discussed, and set aside -- leaving a list of practical and reasonable alternatives to be analyzed. These may include the use of flight simulators, the conducting of training over water, or modifications of the airspace configuration or usage. The "no action" alternative must also be identified and discussed. It is discussed in terms of how it responds to those factors in the "Purpose and Need" and "Selection Criteria" sections. What will happen if you do not conduct the proposed action, other than that the mission will not be met? For example, aircrews will not get the training needed to become proficient in their flying capabilities. A realistic search for alternatives must be done or the public, through the follow-on environmental impact analysis process, may identify alternatives for you.

In summary, a good DOPAA is absolutely essential. A poorly prepared DOPAA can cause delays in schedule and added costs to the EA/EIS. The preparation of a good DOPAA is a team effort and it is critical to do proper planning before the EIAP has commenced. An example of a clear and concise DOPAA is shown in Appendix B.

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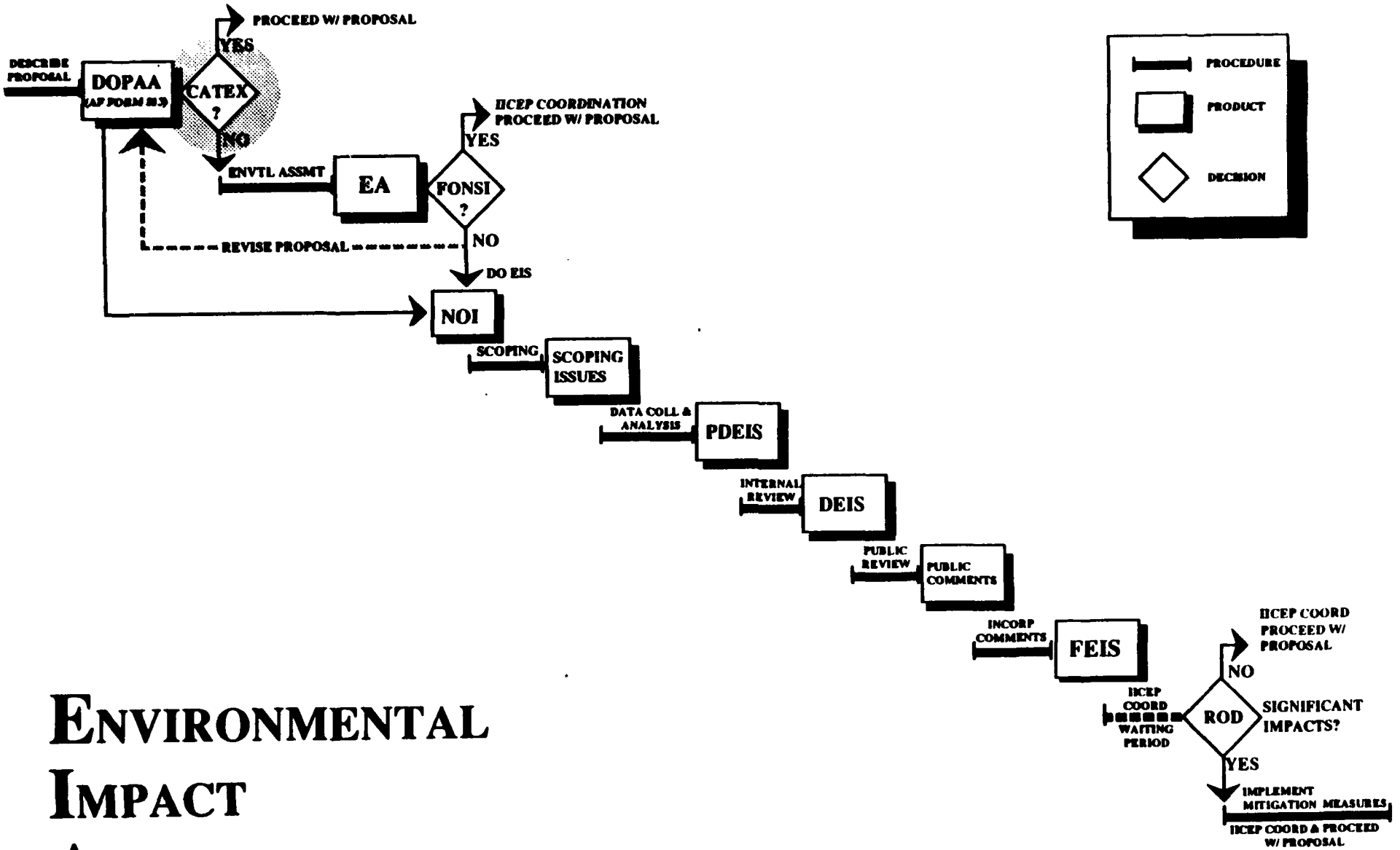


ENVIRONMENTAL IMPACT ANALYSIS PROCESS

CATEGORICAL EXCLUSION

CATEX Determination

Once the airspace proposal transitions from design to development, the AF Form 813 is prepared and formally submitted by the proponent, usually the Deputy Commander for Operations (DO), to the Environmental Planning Function (EPF), usually the Base Civil Engineer (BCE). This action turns the proposal into the DOPAA.

The DOPAA is reviewed by the EPF to determine if a Categorical Exclusion (CATEX) may be applied to the action in accordance with criteria contained in AFR 19-2. Normally, unless the airspace action is to conduct flying operations greater than 3,000 ft AGL, a CATEX cannot be applied. This determination leads to a decision to prepare an EA or EIS.

If an action does qualify for a CATEX as described in the section below, no additional paper work is needed and the proponent is allowed to proceed with the action. The AF Form 813 is signed by the EPF chairman and returned to the proponent. See Figure 1 for an example of a CATEX applicable to an airspace action.

The CATEX

A CATEX is defined as a category of actions which normally do not individually or cumulatively have a significant effect on the quality of the human environment and which require neither an environmental impact statement nor an environmental assessment (40CFR1507.3 and 1508.4).

There are several airspace related CATEX categories identified in AFR 19-2:

1) Formal requests to the FAA for establishing special use airspace (for example, restricted areas, warning areas, military operations areas) and military training routes for subsonic operations, having a base altitude of 3,000 feet above ground level or higher.

2) Temporary (less than 30-day) increases in air operations up to 50 percent of the typical aircraft operation rate or increases of 50 operations a day, whichever is greater.

3) Flying activities complying with the federal aviation regulations that are dispersed over a wide area, and do not frequently (greater than once a day) pass over the same ground points (regular activity on established routes or within MOAs is not covered under this CATEX).

Example: Establishment of a Low Altitude Tactical Navigation (LATN) area if no potentially significant impacts/sensitive receptors are perceived in a preliminary evaluation.

4) Adopting approach, departure, and enroute procedures that do not cause traffic to be routed on a routine basis over noise sensitive areas that may include residential neighborhoods, cultural, historical, and outdoor recreational areas. Such patterns at or greater than 3,000 feet AGL are categorically excluded regardless of underlying land use.

Common sense should be used in determining if the proposal qualifies for a CATEX. To assist you in this determination, prepare a quick environmental evaluation of noise and air pollutant emissions. Identification of sensitive areas, such as national wildlife refuges, populated areas, and wilderness areas on the VFR sectional charts can help you to determine if there is the likelihood of impacts and controversy.

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

FOR ENVIRONMENTAL PLANNING USE ONLY

I REQUEST

1. TO: (Environmental Planning Function): 9AF/DOSA
2. FROM: (Organization and Office Symbol): 116 TFW/DE
3. CONTROL NUMBER:
4. ESTIMATED COMP DATE:
5. REQUESTOR (Name, Office Symbol and Phone No.): RICHARD T. DURANT, MAJOR, DOTS, AV925-4754
6. TYPE OF ANALYSIS NEEDED

X	CATEX DETERMINATION		PRELIMINARY ENVIRONMENTAL SURVEY		ENVIRONMENTAL ASSESSMENT		ENVIRONMENTAL IMPACT STATEMENT

7. TITLE OF PROPOSED ACTION: SNOWBIRD MILITARY OPERATING AREA (MOA) 1 AND 2 BOUNDARY REALIGNMENT

II PROPOSED ACTION AND ALTERNATIVES

8. PURPOSE OF AND NEED FOR ACTION (Continued on Sheets):
Purpose of action is to realign Snowbird 1 and 2 Military Operating areas (MOA's), so as to make boundaries cooincident, with only minor boundary shifting. The need and justification for this action is due to the unsuitability of the area shape. At present, the existing shape of the area lends itself to the increased potential for MOA spillout, which may be hazardous to civil and military aircraft operations.

9. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Continued on Sheets):
To realign Snowbird 1 and 2 boundaries to be cooincident. Raise the lower altitude limit to 11,000 feet MSL (which is still well above the 3,000 feet AGL limit currently in existence). Boundary and altitude limits are as proposed by draft letter of agreement between all users and the FAA. MOA to remain subsonic airspace. See Item 12, Remarks. See Attachment 1, depiction of Snowbird MOA 1 and 2.

10. ORGANIZATIONAL APPROVAL (Name and Grade of Commander)	SIGNATURE	DATE
BRUCE W. MACLANE, Lt Col, GA ANG		3-3-93

III ENVIRONMENTAL PLANNING RESPONSE

11. RESPONSES ATTACHED

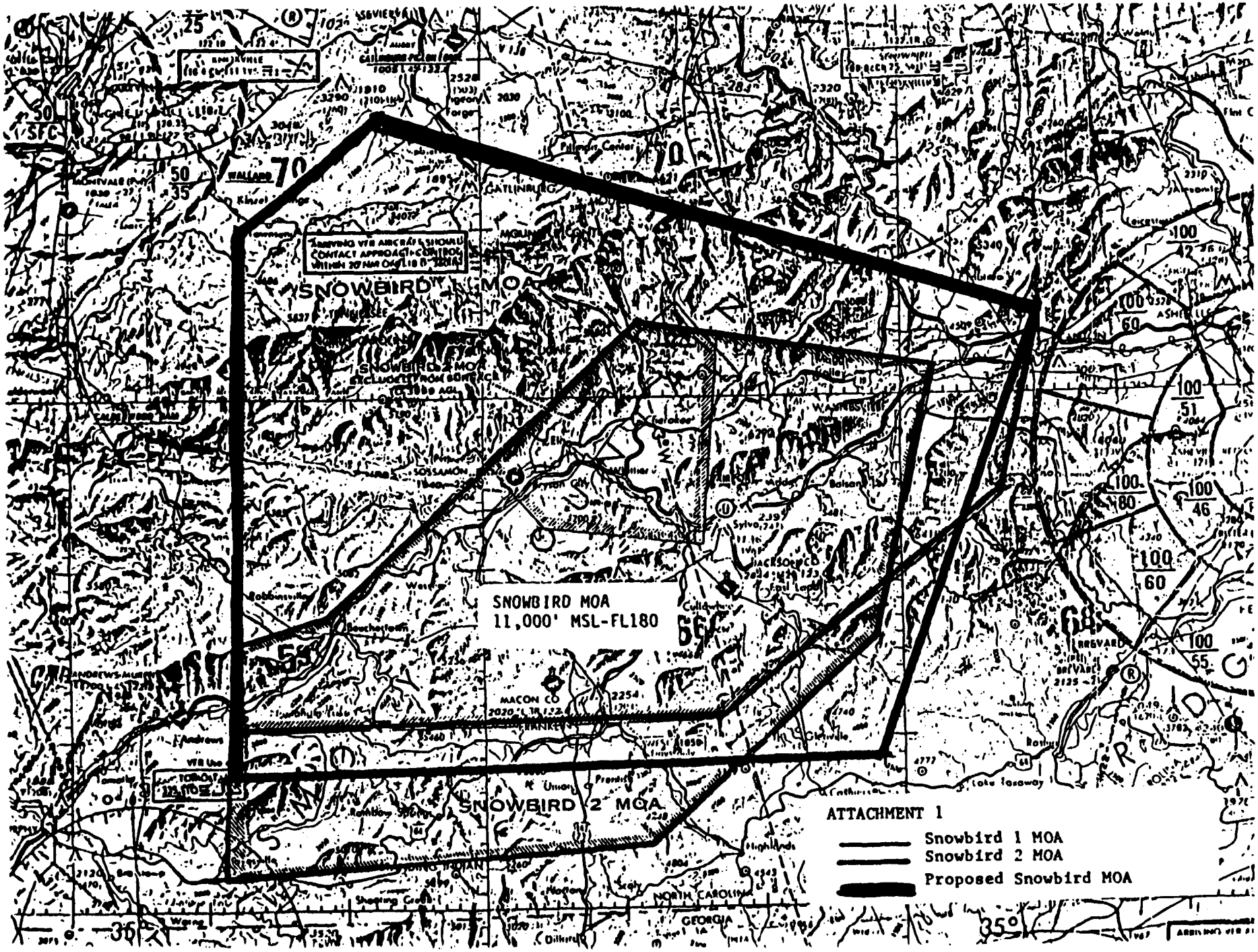
	Preliminary Environmental survey (AF Form 813) attached
X	Proposed action qualified for Catex (Appropriate Documentation attached)
	Proposed action does not qualify for Catex, assessment required

12. REMARKS
Categorical exclusion applies to this Military Operating Area IAW AFR 19-2 Atch 7, Paragraph 2e, since all over flying of ground points occurs above 3,000 AGL.

13. ENVIRONMENTAL PLANNER CERTIFICATION (Name and Grade)	SIGNATURE	DATE
CALVIN D. GILLEY, CAPT, GA ANG BASE ENVIRONMENTAL COORDINATOR		3 MAR 93
14. ENVIRONMENTAL PROTECTION COMMITTEE APPROVAL (Name and Grade)	SIGNATURE	DATE

AF FORM 813 MAY 82 PREVIOUS EDITION IS OBSOLETE.

Figure 1. Example CATEX for SNOWBIRD MOA Realignment


SNOWBIRD 1 MOA
SNOWBIRD 2 MOA
SNOWBIRD MOA
11,000' MSL-FL180
ATTACHMENT 1
Snowbird 1 MOA
Snowbird 2 MOA
Proposed Snowbird MOA

MILITARY OPERATIONS AREA AIRSPACE PROPOSAL

1. The following is a proposed revision of the existing SNOWBIRD 1 and 2 MOAs. The following description deletes the existing SNOWBIRD 1 and 2 MOAs and establishes a single MOA in the same location.

2. DESCRIPTION:

SNOWBIRD MOA, NC

Boundaries. Beginning at Lat. 35°47'00"N., Long. 83°37'30"W.;
to Lat. 35°35'00"N., Long. 82°49'45"W.;
to Lat. 35°08'40"N., Long. 83°01'30"W.;
to Lat. 35°07'45"N., Long. 83°48'10"W.;
to Lat. 35°40'00"N., Long. 83°47'40"W.;
to the point of beginning.

Altitudes. 11,000 feet MSL up to but not including FL180.

Times of Use. Intermittent, 0800L-2100L daily, by NOTAM.

Controlling Agency. FAA, Atlanta ARTCC.

Using Agency. FAA, Atlanta ARTCC.

3. COORDINATION:

a. This proposal has been coordinated with the following organizations and agencies.

(1) Headquarters Ninth Air Force, Shaw AFB, SC.

(2) 116th Tactical Fighter Wing, Dobbins AFB, GA.

(3) 169th Tactical Fighter Group, McEntire ANG Base, SC.

(4) 363rd Tactical Fighter Wing, Shaw AFB, SC.

(5) 110th Tactical Control Flight, Alcoa, TN.

(6) 118th Tactical Control Flight, Kennesaw, GA.

(7) 119th Tactical Control Flight, Alcoa, TN.

(8) 129th Tactical Control Squadron, Kennesaw, GA.

(9) Atlanta ARTC Center.

b. A review of charted special use airspace has been accomplished and there is no existing airspace, except SNOWBIRD 1 and 2, that is located within the radar coverage of the Tactical Control Flights and Squadron located at Alcoa, TN, and Kennesaw, GA.

4. JUSTIFICATION: The existing SNOWBIRD 1 and 2 MOAs are not appropriately designed for the types of flight maneuvers required to attain and maintain controller proficiency and tactical control unit combat readiness. The tactical fighter aircraft, operating in support of the tactical control units, are unable to contain their maneuvers within the lateral and vertical boundaries of the existing SNOWBIRD 1 and 2 MOAs due to the lateral boundaries not being contiguous and the limited vertical dimensions of the individual MOAs. Establishing a single MOA will provide the airspace necessary to contain the required tactical maneuvers and provide the tactical control units with the missions necessary to maintain combat readiness.

5. ACTIVITIES:

a. This airspace is necessary for USAF aircrews to conduct Air Combat Training missions and intercepts in support of the tactical control units located at Alcoa, TN, and Kennesaw, GA.

(1) Air Combat Training missions are flights of two or more aircraft conducting intercepts on unidentified military aircraft. These missions develop the tactical skills necessary to accomplish an intercept based on information derived from on-board radar systems, close to a visual range which will provide positive identification of the unknown aircraft, and then maneuver vertically and horizontally as needed to gain a tactical advantage and complete a simulated missile attack. Conversely, the target aircraft will vary speed and headings to counter the air threat and prevent the intercept aircraft from gaining a tactical advantage. This training prepares aircrews to enter the aerial combat arena with the highest possible chance for mission success, and is best achieved by a structured program that exposes aircrews to different aircraft types employing the spectrum of valid tactics. These missions will be performed within the altitude block of 11,000 feet MSL to FL290; therefore, air traffic control assigned airspace (ATCAA) will be requested from FL180 to FL290 above the proposed MOA.

(2) The weapons directors in the tactical control unit radar facility provide radar advisory service to the pilots of both the interceptor flight and the target aircraft to assist them in establishing airborne radar and visual contact, and a successful engagement.

b. Operations will normally be conducted between 0800L and 1800L Monday through Sunday. Occasionally night intercept training will occur between 1800L and 2100L. Aircraft will be scheduled in flights of two, four or eight aircraft per mission. Operations within this airspace will normally average two hours in the morning and two hours in the afternoon. Specific time blocks are to be negotiated between the using agency and the controlling agency, as necessary, to accommodate both military and civil requirements.

c. This MOA will normally be used by, but not limited to, F-4, F-16 and F-15 aircraft.

d. The proposed airspace will normally be under the radar surveillance of a military radar unit (MRU).

e. All operations within the proposed airspace will be subsonic.

6. SAFETY CONSIDERATIONS: Operations will be contained within the airspace by visual reference to the surface, aircraft navigation instruments and radar advisories by the MRU.

7. COMMUNICATIONS AND RADAR: While operating within the MOA, pilots will maintain communications with an MRU, if available, which will also provide radar advisories.

8. ENVIRONMENTAL INFORMATION: This proposal has been environmentally assessed and certified to be in compliance with the National Environmental Policy Act (NEPA). Comments concerning the environmental aspects of this proposal should be addressed to:

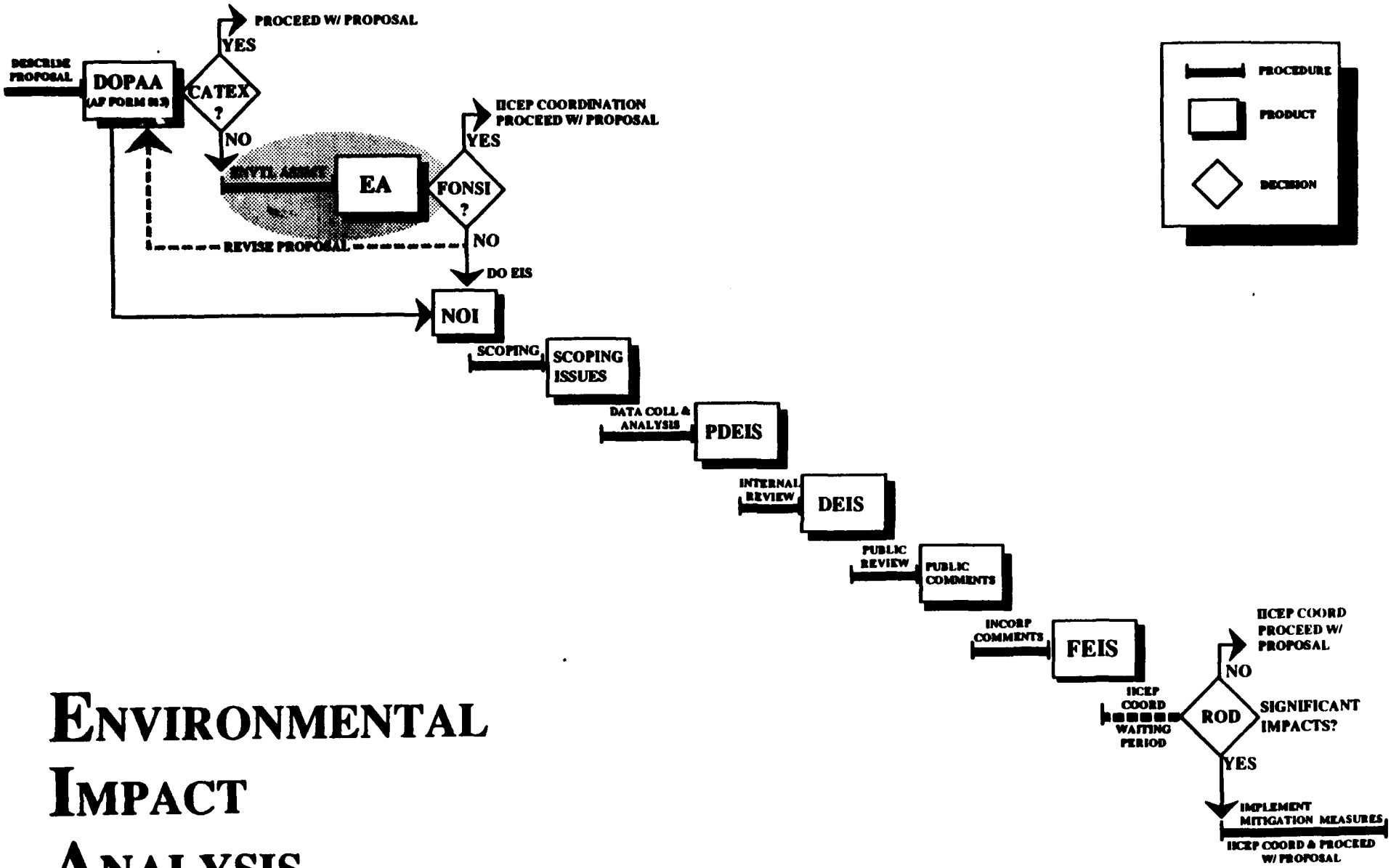
Air National Guard Support Center/DEV
Andrews AFB, MD 20331-6008

9. JOINT USE: The proposed MOA will be joint use. The airspace will be released to participating units by the controlling agency for military operations during precoordinated times.

10. REMARKS:

a. An ATCAA, the same lateral dimensions as the SNOWBIRD MOA, from FL180 up to and including FL290, is also proposed and necessary. Utilization of the full altitude block of 11,000 feet MSL up to and including FL290 is required in order to provide reasonable assurance that the aircraft maneuvers can be contained within the airspace.

b. The present SNOWBIRD 2 MOA contains an exclusionary area 3,999 feet AGL and below over the Cherokee, Whittier, Dillsboro, Bryson City, Ela areas. Considering the highest peak charted within this area is 4,700 feet MSL, the 11,000 feet MSL floor proposed for this MOA is higher than the present exclusionary area. This proposal deletes all altitudes below 11,000 feet MSL of the existing SNOWBIRD 2 MOA.



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

ENVIRONMENTAL ASSESSMENT

Preparation of an Environmental Assessment

Once a CATEX is determined to be nonapplicable, the proponent is now faced with the decision of preparing an EA or EIS. An EA is not an alternative to an EIS, but is , as the name implies, an assessment of potential environmental impacts. After an EA is completed, an EIS is prepared if significant environmental impacts were identified during the assessment process. If no significant environmental impacts have been identified, the agency will issue a finding of no significant impact (FONSI). It is important to remember that an EA and FONSI (or even an EIS) and the conclusions in them about the probable environmental impacts of the proposed action and alternatives are not the only factor considered in the proponents decision as whether to proceed with the project. Social, economic, or political factors, unrelated to environmental impacts, also enter into the decisionmaking process.

An EA is not an alternative to an EIS, but is , as the name implies, an assessment of potential environmental impacts.

The following excerpt is taken from NEPA and should be used as guidance for when to prepare an EA. In narrowing a planner's action, it begins with direction on whether to prepare an EIS at the outset.

> 1501.4 Whether to prepare an environmental impact statement.
>
> "In determining whether to prepare an environmental impact statement the Federal agency shall:
>
> (a) Determine under its procedures supplementing these regulations (described in 1507.3) whether the proposal is one which:
>
> (1) Normally requires an environmental impact statement, or
>
> (2) Normally does not require either an environmental impact statement or an environmental assessment (categorical exclusion).

(b) If the proposed action is not covered by paragraph (a) of this section, prepare an environmental assessment (1508.9). The agency shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by 1508.9(a)(1).

(c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement.

(d) Commence the scoping process (1501.7), if the agency will prepare an environmental impact statement.

(e) Prepare a finding of no significant impact (1508.13), if the agency determines on the basis of the environmental assessment not to prepare a statement."

To assist in making this determination, the Air Force has provided the following guidance in AFR 19-2:

The proponent must integrate the EIAP into the early planning stages of a proposed action and, with the EPF, determine as early as possible whether to prepare an EIS.

a. The following criteria are provided to help identify actions that usually require preparing an EIS:

(1) Potential for significant degradation of environmental quality.

(2) Potential for significant threat or hazard to the public health or safety.

(3) Public controversy concerning significance or nature of the biophysical environmental impact of an action.

(4) Potential for significant impact on protected natural or historic resources.

b. In any case that involves a proposed action that usually requires an EIS, the EPF responsible for preparing the documentation may prepare an environmental

assessment to determine if an EIS is required based on the analysis of environmental impacts.

It is recommended that the DOPAA be forwarded under the IICEP process to the potentially affected agencies (federal, state, and local) asking for any information, comments, or recommendations that would be germane in preparing the EA. (See Relations and Durations section.) A copy of such a letter is shown in Figure 2. The information received plus what may be gathered by the team forms the basis of the environmental setting which, in turn, sets up the analysis. Procedurally, while information is forthcoming from the agencies, all sources of information available (see Appendix E) locally should be exhausted and formulated into the EA product. This process would be normally expected to take 30-60 days, dependent upon the action in question.

The EPF conducts information gathering and processing. Once data collection is complete and all comments have been received from the IICEP process, the EA can be produced. It usually takes 60-90 days to prepare, analyze, and draw conclusions.

The EA should be prepared in draft form and forwarded to EPC members for internal review, comment, and appropriate recommendation. Two to three weeks should be allowed for this process, including a formal meeting of the EPC, if necessary. Depending on the nature of the action and guidance from your MAJCOM, only certain EPC members may need to review the EA.

A special footnote: Dependent upon the nature of the action, Regional AFRCEs, HQUSAF/LEEV and SAF/RQ should be provided the opportunity to review and comment on certain draft EAs. At times the MAJCOM will be directed to forward the EA for review.

The Environmental Assessment

The environmental assessment (EA) should be a concise document that summarizes the proposed action and its alternatives, the purpose of and need for the action, and its

Mr Gerald Heath, Forest Supervisor
Medicine Bow National Forest
605 Skyline Drive Laramie, Wyoming 82070

Dear Mr Heath

The US Air Force Strategic Air Command (SAC) is proposing the establishment of two new temporary low-level military training routes to be used for the 1990 Operational Readiness Inspection (ORI) and the 1990 Bomb Competition, PROUD SHIELD. Both of these routes are being established to improve and evaluate aircrew ability to counter radar detection. Please refer to the attached map for location of the routes.

Instrument Route (IR) 470 will be used for the 1990 ORI. This route will be operational for 45 weeks commencing July 1990. An average of 15 aircraft will use the route each day.

IR 471 will be used for PROUD SHIELD. PROUD SHIELD will commence in October 1990 and be operational for two weeks. Flights will be on four consecutive days per week. The specific days are not known at this time. There will be an average of 13 aircraft per day using the route.

Both routes will be used by B-52G and H models, F-111s, and B-1Bs. All aircraft will fly at subsonic speeds, with B-52Gs and Hs averaging 403 mph, F-111s approximately 518 mph, and B-1Bs about 621 mph. Minimum altitudes for all aircraft will be 400 feet above ground level (AGL) during the day and 500 feet AGL at night. The flights will be evenly split between daytime and nighttime. Flights will consist of all the same aircraft, i.e., all B-52s, F-111s, or B-1Bs. There will not be a mixture of aircraft flying the same route on the same day.

Although aircraft may use the full width of the corridors, aircraft will normally be within one mile of the corridor centerlines. Through a preliminary review, SAC believes that the proposed flight corridors satisfy both operational and environmental constraints and are considered to be the optimum locations for these routes.

An environmental assessment is being prepared for both IR-470 and IR-471. We would appreciate any comments or pertinent information you may gave regarding any potentially significant impacts these training flights may have on the Thunder Basin National Grasslands.

We would very much appreciate a response within 30 days after receipt of this letter. If you have any questions regarding this proposal, please contact Sheri Rivera at (402) 294-5854. Your assistance is appreciated.

Sincerely

GEORGE H. GAUGER, GS-12
Acting Chief, Environmental Planning
DCS/Engineering and Services

1 Atch
Route Map

Figure 2. Example of cover letter to initiate IICEP process

possible environmental impacts. The EA should include any mitigations that are part of the proposed action, are required by law, or have been developed during the analysis process, as well as the expected effectiveness of these mitigations when implemented. The three primary purposes of an EA are to:

- Briefly provide sufficient evidence and analysis for determining whether to prepare a FONSI or an EIS;
- Aid an agency's compliance with NEPA when no environmental impact statement is necessary;
- Facilitate the preparation of an EIS when one is necessary.

An EA should contain, as appropriate, the following information:

- a clear and concise description of the proposed action, including drawings, maps, and charts, if directly pertinent to analyzing the environmental consequences of the proposed action;
- description of the existing environment affected by the proposed action, only in sufficient detail to permit a meaningful evaluation of the potential environmental consequences of the proposed action;
- an assessment of the probable impacts of the proposed action, including direct and indirect effects and those adverse impacts which cannot be avoided should the proposal be implemented;
- an evaluation of the probable cumulative and long term environmental effects including any beneficial impacts.

There is no set format for an EA. The CEQ regulations do not contain page limits for EAs but the CEQ has generally advised agencies to keep the length of EAs to not more than 10 to 15 pages. Although there are many variations, the following is a suggested format for an airspace EA:

EA Format

Summary

Table of Contents

Section 1.0 Introduction

- 1.1 Purpose and need (incl. selection criteria)
- 1.2 Location of the Proposed Action
- 1.3 Regulatory Compliance

Section 2.0 Description of the Proposed Action and Alternatives

- 2.1 Proposed Action
- 2.2 Alternatives (to include the no action alternative)

Section 3.0 Existing Conditions (or Affected Environment)

- 3.1 Earth Resources
- 3.1.1 General Geology
- 3.1.2 Soils (A detailed description is not needed, perhaps only identifying the topography or physiographic region of the area)
- 3.2 Water Resources (large bodies of water, rivers, lakes etc.)
- 3.3 Air Quality
- 3.4 Biological Resources
- 3.4.1 Physiographic Setting and Vegetation
- 3.4.2 Wildlife Resources
- 3.4.3 Aquatic Resources (not applicable unless a potential for impact in proposal)
- 3.4.4 Threatened and Endangered Species
- 3.4.5 Domestic Animals (large cattle feedlots, poultry farms, dairies, horse ranches)
- 3.5 Visual Resources
- 3.6 Land Use
- 3.6.1 Nationally Protected Land

3.6.2 National and State Parks
3.6.3 National Forests
3.7 Cultural Resources (Historic Landmarks, American Indian Lands)
3.8 Noise
3.8.1 Current Noise Levels/Ambient Conditions
3.9 Socioeconomics
3.9.1 Population/Communities
3.9.2 Facilities/Structures
3.10 Airspace (Air Traffic and Airspace)
3.11 Safety

Section 4.0 Environmental Consequences of Proposed Action and Alternatives

4.1 Earth Resources
4.2 Water Resources
4.3 Air Quality
4.4 Biological Resources
4.4.1 Physical Disturbance of Vegetation and Habitat Resources
4.4.2 Disturbance to Wildlife
4.4.3 Threatened and Endangered Species
4.5 Visual Resources
4.6 Land use
4.7 Cultural Resources
4.8 Noise
4.9 Socioeconomics
4.9.1 Population/Communities
4.9.2 Facilities/Structures
4.10 Airspace
4.11 Safety
4.11.1 Aircraft Accidents
[illegible] Bird Aircraft Strike Hazard

Section 5.0 Findings/Conclusions

Section 6.0 Mitigations and Special Operating Procedures

Section 7.0 References

Section 8.0 Persons and Agencies Contacted

Section 9.0 List of Preparers

Section 10.0 Appendices:

A. Detailed Description of Proposed Airspace
B. Aircraft Descriptions or Fact Sheets
C. Wildlife Species/Endangered Species Listing

etc...

Successful EAs usually follow the above mentioned format and avoid the following deficiencies:

- Failure to consult;
- Failure to write in a form that is understandable to the nontechnical reader yet contain enough scientific content and reasoning to alert specialists;
- Failure to discuss the probable environmental impacts, their cumulative effects, and secondary impacts.
- Failure to discuss how unavoidable negative effects would be mitigated.
- Failure to develop and discuss an appropriate range of alternatives.
- Failure to discuss short-term benefits and long-term costs.
- Failure to identify irreversible and irretrievable commitments of resources.

Mitigations

Under some circumstances, if a proposed action's significant impacts can be mitigated sufficiently to obviate them or result in nonsignificance, an agency can prepare an EA with a FONSI instead of an EIS. The CEQ defines mitigation as: (a) avoiding the impact altogether; (b) minimizing the impacts by limiting the degree or magnitude of the action; (c) rectifying the impact

by repairing or restoring; (d) reducing or eliminating the impact by preservation and maintenance operations during the life of the action; and (e) compensating by replacing or providing substitute resources or environments.

The agency's commitment to mitigation in an EA must be evidenced in order to rely upon those measures in lieu of preparing an EIS.

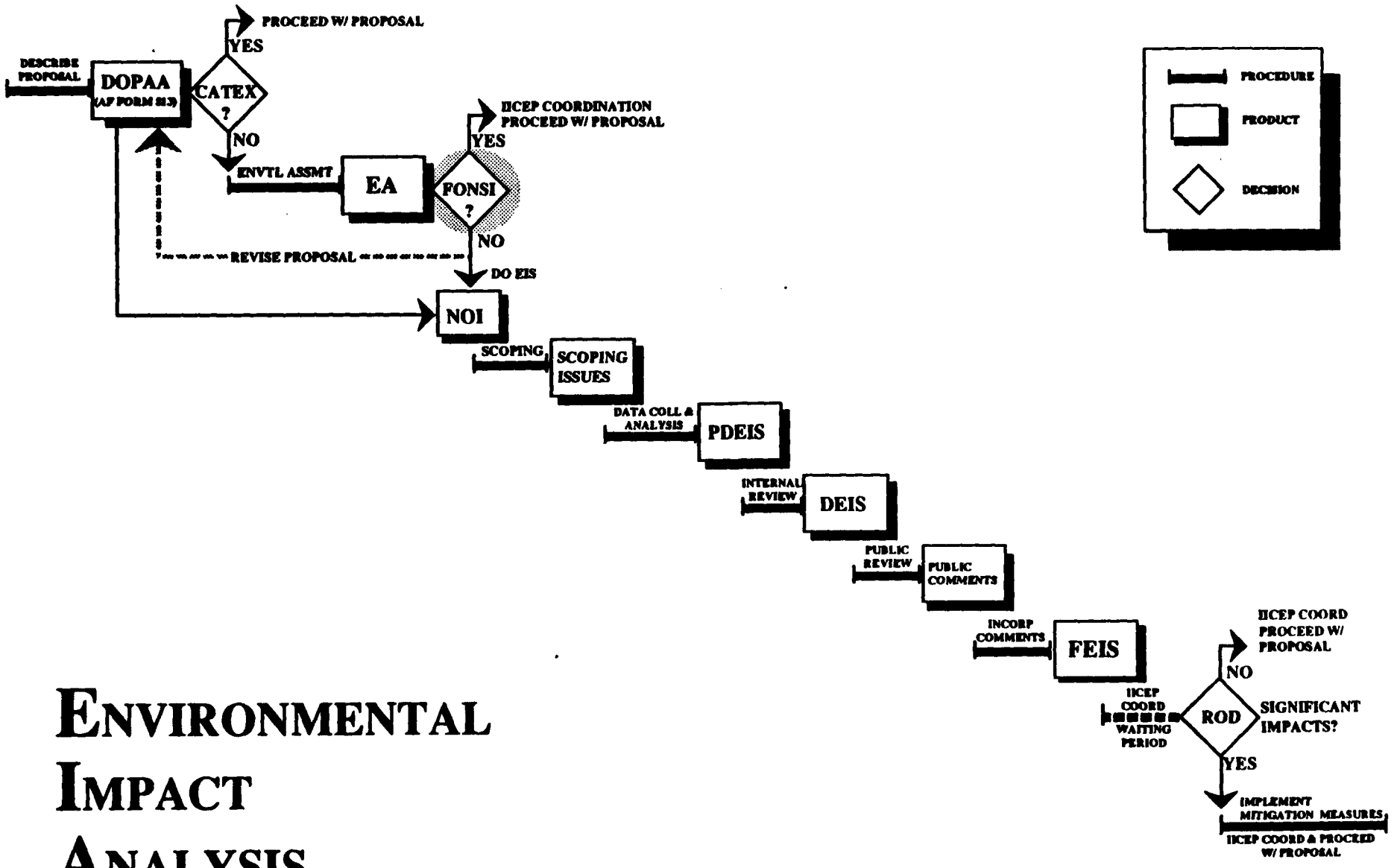
The agency's commitment to mitigation in an EA must be evidenced in order to rely upon those measures in lieu of preparing an EIS. An example of committed mitigation procedures is contained in Appendix C for SAC's proposed usage of the Fort Drum Weapons Range and IR-806 in New York. The corresponding Mitigation Plan, a portion thereof is also included in the appendix, represents a formal agreement of committed mitigations between the State of New York and HQ SAC.

Mitigation examples

Mitigation measures should be developed early in the planning process when an action is first contemplated and may be included as part of the proposed action. Consultation with other agencies (federal, state, and local) should be undertaken to help identify mitigation measures that can be addressed at an early stage. Evaluate mitigation strategies in terms of cost, effectiveness, and practicability. Examples of mitigation measures for airspace actions are:

- Adjust airspace laterally
- Adjust airspace altitude
- Provide alternate exits, entries
- Seasonally adjust usage
- Time changes (day operations only)
- Reduce number of sorties
- Shift number of sorties from route to route
- Change aircraft percentages
- Avoid national parks, national wildlife refuges, wilderness areas, national monuments, Indian Reservations when possible.

- Institute public affairs program
- Maintain flexibility in scheduling
- Accommodate special events, i.e., special recreational/religious events, ski resorts
- Avoid horse breeding stables
- Avoid large cattle feedlots
- Avoid large poultry farms, dairy farms
- Avoid large bodies of water with known waterfowl (high usage) feeding, roosting, or nesting locations.
- Avoid T&E species nesting locations, critical habitat, state sensitive species (if applicable)
- Avoid crop dusting activities in progress
- Avoid area-sensitive activities identified by local concerns
- Avoid wild and scenic rivers when possible
- Avoid areas prone to avalances/rock slides (if known)



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

FINDING OF NO SIGNIFICANT IMPACT

The FONSI

After internal review is complete, the EPF recommends whether the action qualifies for a FONSI, needs to be modified, or requires an EIS. If a FONSI is recommended, the EA process, from a working standpoint, is complete. The FONSI, which summarizes the DOPAA, findings and conclusions is signed by the Chairman of the EPC as is the AF Form 813. The FONSI and document are then forwarded to the local, state, and federal agencies with a letter of explanation. An example of a FONSI is shown in Appendix D. Normally, a 30 day waiting period is not required before proceeding with the proposed action when a FONSI is determined. However, the FONSI must be made available for public review for at least 30 days before the final determination on preparing an EIS or before the action may begin under circumstances in (1) through (4) below:

(1) If it is an unusual case, a new kind of action, or a precedent-setting case such as a first intrusion of even a minor development into a pristine area.

(2) When there is either scientific or environmental controversy over the proposal.

(3) When it involves a proposal that is similar or is closely similar to one that usually requires preparation of an EIS (40 CFR 1508.27).

(4) If the proposed action would be located in a flood plain or wetland. (EO 11988, Section 2(1)(4); EO 11990, Section 2(b). Under the above circumstances, a copy of the FONSI and supporting environmental documents must also be sent to the next higher EPF headquarters.

In addition, in the case of an action with effects of national concern, the FONSI must be published in the Federal Register.

The FONSI should summarize the findings of the EA, note any documents related to it, and identify those mitigation measures that must be undertaken as part of the proposed action. AFR

19-2, paragraph 11, page 5, further explains what type of information is required in a FONSI. To support a FONSI, the EA must demonstrate that the Air Force took a "hard look" at the potential environmental effects of the action before determining that a FONSI could be made. Most proponents approach the preparation of an EA with the preconception that it will result in a FONSI. This is not the intent of NEPA, nor does such a preconception allow the proponent the required "hard look." If the preconception of a FONSI is made, the EA becomes an exercise of paperwork just to fill a square.

The signature page should evidence that the EPC chairman has reviewed and approved the EA. For unclassified actions, the FONSI should be released to the public or to the public via the appropriate AFRCE office who will in turn make appropriate distribution to the state clearinghouse (SPOC) and federal, state, and local agencies.

The Need for an EIS

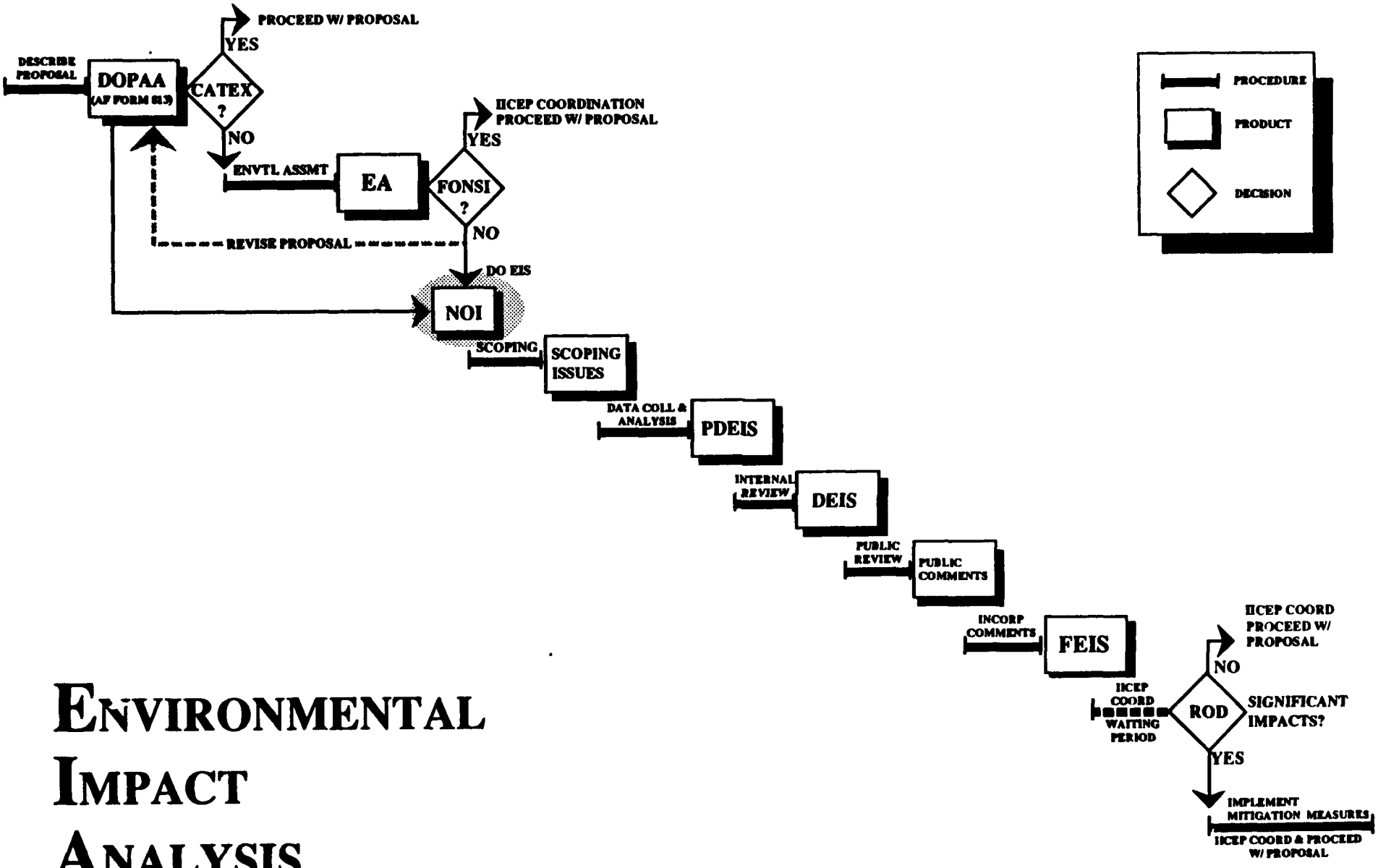
If a FONSI can not be justified for the proposed action, including mitigations, an EIS must be prepared. When you undertake to write an EIS you have at least two audiences. The first is the decision maker whom the document is intended to inform. The second audience is the public. It can be safely said that any proposal that warrants an EIS will have some form of controversy. Expect careful scrutiny from both audiences.

The EIS must be legally unassailable and show that there is a well documented intention to provide the decisionmaker with a "hard look" at the environmental consequences of the proposed action. If inadequacies in the environmental analyses can be proven, a temporary restraining order may be granted, prohibiting the proponent from proceeding with the proposed action until the environmental impacts have been adequately addressed in the eyes of the court.

Your ambition should be to produce a successful EIS; the question is: "What is a successful EIS?" That depends upon the audience that is reading it. From your client's perspective (the proponent usually) successful means that the EIS is within cost and that the analysis is adequate to forestall litigation. From the public's perspective, it may mean acknowledgment that all environmental impacts are adequately identified and analyzed.

If a suit is filed against the program, the definition of a successful EIS becomes the court's finding that the EIS is not inadequate. The definition of an unsuccessful EIS is when it is found to be legally inadequate in whole or part. Omission or inadequate analysis of a single significant environmental impact is grounds for the court to find the EIS inadequate. The program may be enjoined until that particular impact is reaccomplished.

So, an EIS may be so successful that it precludes effective legal challenge, or it may be so spectacularly unsuccessful that it must be reaccomplished in its entirety. Somewhere in the middle of this range of performance is an EIS that is both economical and "adequate."



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

NOTIFICATION OF INTENT

Prepare and Submit Notice of Intent (NOI)

Once the decision has been made that the action requires preparation of an EIS, the EPF should follow the procedures outlined in AFR 19-2.

As soon as practicable after the agency decision to prepare an EIS, a notice of intent is published in the Federal Register to let the public know that an EIS will be prepared. Publication of the NOI initiates a public scoping period and the EIS process. The NOI invites comments and suggestions on the proposed scope of the EIS, including environmental issues and alternatives, and invites participation in the NEPA process.

The Notice of Intent

A Notice of Intent (NOI) is prepared by the planning function when it is decided that an EIS will be prepared. The notice shall briefly: (a) describe the proposed action and possible alternatives, (b) describe the agency's proposed scoping process, including when and where any scoping meetings will be held, and (c) state the name and address of a person within the agency who can receive comments and answer questions about the proposed action and the EIS.

The NOI submission must be typed double-spaced and in accordance with Federal Register format requirements. The NOI is then forwarded to the MAJCOM and subsequently to HQUSAF/LEEV 30 days prior to the desired publication date for further review and submittal to the Federal Register for publication. In addition to the Federal Register NOI, diligent effort should be made to notify and involve the public through announcements in local newspapers (get public affairs involved), letters to interested or affected Federal, state, and local government officials, and interested citizens and/or community groups (40CFR1506.6). Figure 3 provides an example of the NOI coordination procedure.

Dear 7 October 1988

This is to inform you of our intent to prepare an Environmental Impact Statement on the proposed Electronic Combat Test Capability at the Utah Test and Training Range. The attached Notice of Intent, to be published in the Federal Register today, provides information on this project.

The Environmental Impact Analysis Process will be managed by the Air Force Regional Civil Engineer (AFRCE-BMS) at Norton Air Force Base, San Bernardino, California. We will be happy to provide you with a briefing on the proposal if you so desire.

In order to identify the range and depth of the significant environmental issues associated with the proposal, we are embarking on a scoping process which could include input from your agency. Someone from this office will be contacting you regarding any input you might have to assist in the identifying or eliminating potential environmental issues. If you have any questions, please feel free to contact myself or Mr John Sollid at (714) 382-3804.

Sincerely

THOMAS J. BARTOL, Lt Col, USAF
Director
Programs & Environmental Division

2 Atch
1. Notice of Intent
2. NOI IICEP Schedule

Figure 3. Example NOI package to agencies

Additions.

If the Committee approves the proposed additions, all entities of the Federal Government will be required to procure the commodity and service listed below from workshops for the blind or other severely handicapped.

It is proposed to add the following commodity and service to Procurement *List 1988, December 10, 1987 (52 FR 46928).*

Commodity

Candle, Illuminating, 6280-00-840-5578.

Service

Commissary Warehouse Service, Nellis Air Force Base, Nevada.

Deletions

It is proposed to delete the following services from Procurement List 1988, December 10, 1987 (52 FR 46928): Furniture Rehabilitation at the following locations: Altus Air Force Base, Oklahoma, Lawton, Oklahoma including Fort Sill, Oklahoma City, Oklahoma, plus 25-mile radius, including FAA and *Tinker Air Force Base, San Antonio,* Texas, Plus 40-mile radius, Wichita Falls, Texas, including Sheppard Air Force Base.

E.R. Alley, Jr.

Acting Executive Director.

[FR Doc. 88-23211 Filed 10-6-88; 8:45 am]

BILLING CODE 6820-33-M

DEPARTMENT OF DEFENSE

Office of the Secretary

Renewal of the Ada Board

ACTION: Renewal of the Ada Board.

SUMMARY: Under the provisions of Pub. L. 92-463, "Federal Advisory Committee Act," notice is hereby given that the Ada Board has been determined to be in the public interest and has been renewed.

The Ada Board provides a balanced source of advice and information on the technical and policy aspects of establishing Ada as a common, high-order computer programming language in the Department of Defense. It is expected that the Ada Board will continue to address issues associated with the direction of the Ada program, the requirements for modifying the current Ada language standard in accordance with the American Standards Institute, and the processing of Ada language commentaries.

October 4, 1988.

Linda M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 88-23174 Filed 10-6-88; 8:45 am]

BILLING CODE 3810-01-M

Medical and Dental Reimbursement Rates for Fiscal Year 1989

Notice is hereby given that the Principal Deputy Assistant Secretary of Defense (Comptroller) in a September 23, 1988, memorandum to the Assistant Secretary of Defense (Health Affairs), Assistant Secretaries of the Army and Navy (Financial Management), and Comptroller of the Air Force established reimbursement rates for inpatient and outpatient medical and dental care provided during fiscal year 1989 as follows:

	IMET [1]	Interagency [2]	Other
Per inpatient day:			
Burn unit	$1,126	$1,890	$2,020
General medical and dental care	191	458	494
Per outpatient visit	23	[3] 62	67
Per FAA air traffic controller examination		91	

[1] International Military Education and Training students.

[2] Other Federal Agency-sponsored patients and Government civilian employees and their dependents outside the United States.

[3] DoD Civilian employees located in overseas areas shall be provided a bill when the services are performed. Payment is due 60 days from the date of the bill.

The per diem rate (supplies and subsistence) charged to dependents of military personnel in Federal medical facilities shall become $8.05 per day beginning January 1, 1989.

October 4, 1988.

L.M. Bynum,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc 88-23231 Filed 10-6-88; 8:45 am]

BILLING CODE 3810-01-M

Department of the Air Force

Intent To Prepare an Environmental Impact Statement (EIS) on the Proposed Electronic Combat Test Capability Program at the Utah Test and Training Range

The United States Air Force will accomplish a tiered environmental impact analysis process concerning the phased upgrade of the existing Utah Test and Training Range (UTTR) to support an electronic combat test capability. The UTTR is a major range and test facility base in Northwestern Utah, with airspace extending into Eastern Nevada. The range is operated for the Department of Defense by the Air Force Flight Test Center, Edwards AFB, California. The UTTR provides range facilities for all phases of the test and evaluation of manned and unmanned aircraft systems. The Air Force proposes to upgrade the UTTR mission to include a dedicated range which integrates electronic combat systems to support the various tests and evaluations of existing and future combat weapon systems. The UTTR will continue to support air/land battle training scenarios and strategic/special operations test requirements for the military.

The EIS, to be completed in mid-1989, supports the decisionmaking process associated with phased construction and operation of the system at increasing levels of capability from 1989 through the year 2000 at UTTR. It will also address the site-specific consequences of facility construction and other activities in fiscal years 1990 through 1993, to provide a near-term electronic combat test capability. The mature system would include facilities sited on Hill AFB, Utah, and at various locations within the UTTR. The specific construction and other activities for fiscal year 1994 and on will be addressed in subsequent environmental documentation. This tiered process allows the environmental documentation to "* * * focus on the actual issues ripe for decision at each level of environmental review." (40 CFR 1502.20)

Public scoping workshops will be held in Delta, Ibapah, Ogden, Tooele, Utah and Wendover, Nevada during the week of 14 November 1988. All workshops will be conducted between 12 o'clock noon and 8:00 p.m. Air Force representatives will be available to meet and discuss plans for activities within the Range and seek public input on those issues to be addressed within the EIS. Exact times and locations of these workshops will be sent to public officials and the local media. For further information, please contact:

Lt. Col. Thomas Bartol,

AFRCE-BMS/DEP, Norton AFB CA 92409-6448.

Patsy J. Conner,

Air Force Federal Register Liaison Officer.

[FR Doc. 88-23132 Filed 10-6-88; 8:45 am]

BILLING CODE 3910-01-M

ATCH 1

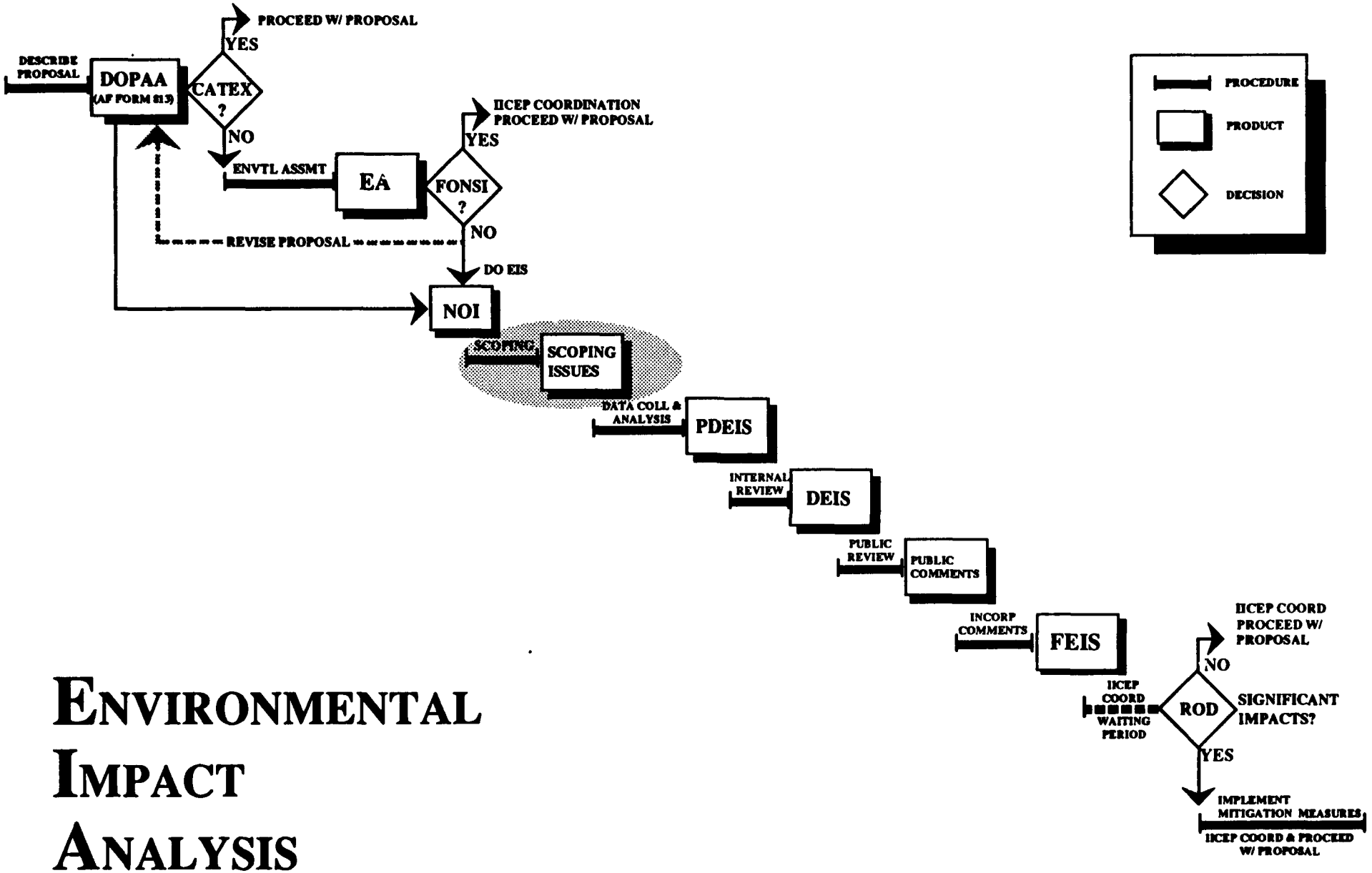
E X A M P L E

NOI IICEP SCHEDULE

DATE	ACTIVITY	OPR	OCR
9/23	NOI/Scoping Sections sent For Review/Coordination	HQ USAF/LEEV	AAF/AQQ, AFOTEC
9/30	NOI to Federal Register	SAF/AADA	HQ USAF/LEEV
10/5	Letters to Nevada & utah Congressional Delegation	SAF/LL	SAF/AQQC
10/6	Letters to Nevada and Utah Governors	OOLAC/CC	AFOTEC AFRCE
10/7	NOI PUBLISHED		
	Letters to Federal, State & Local Agencies	AFRCE	AFOTEC
	Letters to Native Americans	AFRCE	AFOTEC
	Press Release	AFOTEC/PA	AFRCE

E X A M P L E

ATCH 2



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

SCOPING

Scoping

Scoping is intended to elicit concerns and issues from affected agencies and the public. As such, it may identify issues or concerns that have not been anticipated by the proponent.

In practical terms, scoping is primarily a logistics challenge to the environmental planner. He must make travel, accommodations, meeting, and public affairs arrangements to effectively reach the affected agencies and public. Comments received during the scoping process must be recorded and documented.

The Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508) implementing the National Environmental Policy Act (NEPA) require "...an early and open process for determining the scope of issues related to the proposed action." The purposes of scoping are:

- Identify the significant issues for study in the Environmental Impact Analysis Process (EIAP);
- Determine the scope of coverage for each issue; and
- Identify and eliminate from detailed study the issues which are not significant.

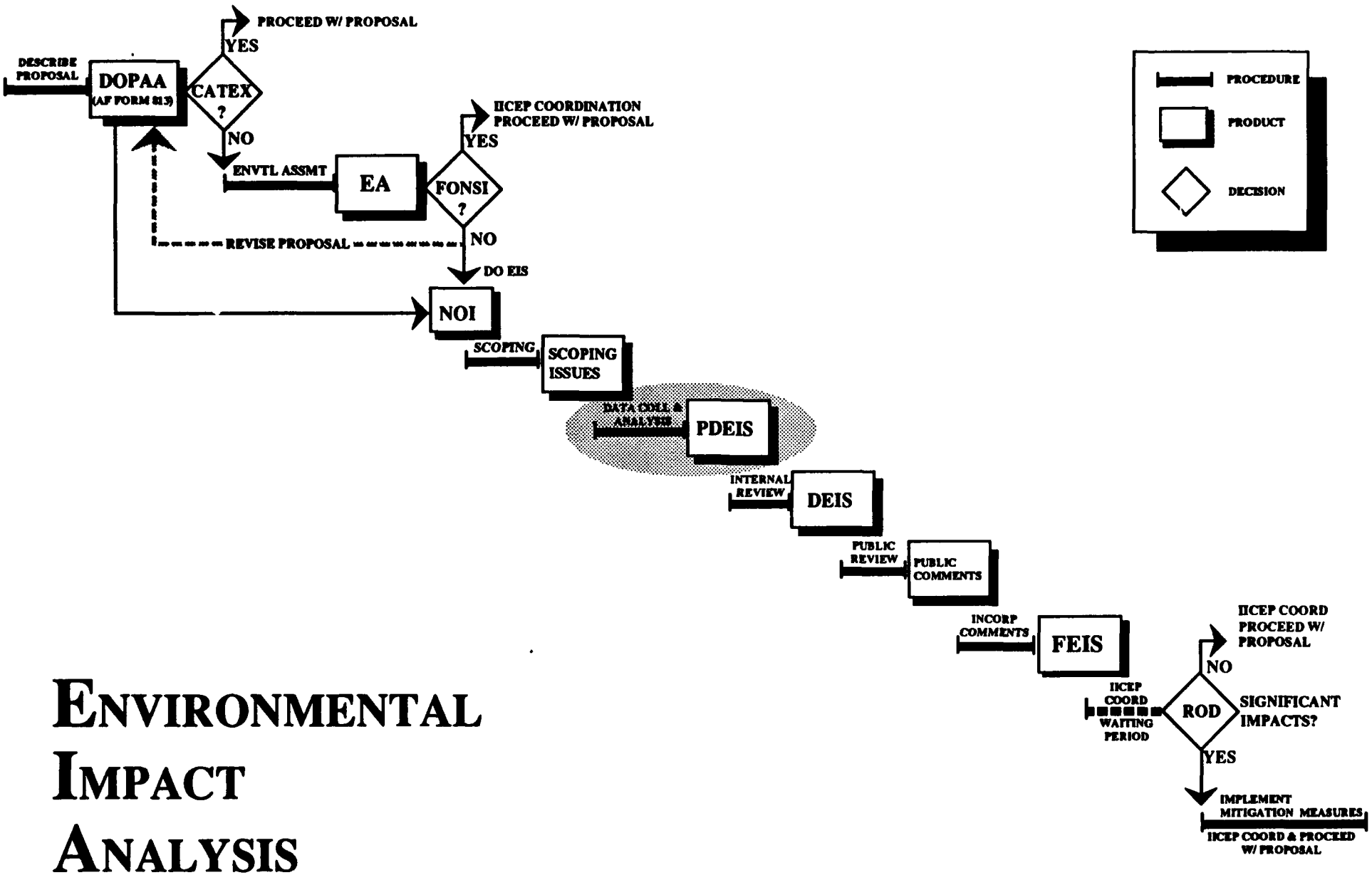
Scoping activities are undertaken in response to these federal requirements as part of the assessment of environmental impacts of major federal actions. The purpose of the scoping process is to guide the development of the EIS. Scoping involves a number of activities that include:

- A series of prescoping visits to federal, state, and local government offices in the study areas. The Air Force team will preview the proposed requirements, the scoping process, collect preliminary data, and identify and validate additional issues/ concerns.
- A series of public scoping meetings with individuals and groups from the affected areas. The meetings will describe

the proposed action and solicit/validate concerns about the proposed action.

With the initiation of these meetings, contacts will be made with various public organizations and individuals in order to identify the interested parties regarding the development of the proposed action.

Scoping meetings allow the public and affected agencies an opportunity to provide input on the type of environmental analysis to be conducted for the project. They afford the Air Force an opportunity to gain information on which controversial areas need detailed analysis in the EIS.



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

PRELIMINARY DRAFT EIS

Data Collection/Analysis

No place is 'empty'. Every place has an environment. When you examine that environment you will find something. In other frames of reference that something may seem inconsequential, but in its own environment, that 'something' fits. Where you search, you will find. The closer you examine, the more you will find.

Similarly, when you propose an action in an environment, you will displace or affect something in that environment. Again, what you affect may seem inconsequential to you, but the displacement may be monumental to the affected resource or environment. In addition to gathering information from federal, state, and local agencies, a listing of sources of information can be found in Appendix E. Chapter 5 will describe the analysis procedures in more detail for airspace EIAP documentation.

Preliminary Draft EIS (PDEIS)

Data collection and analysis is conducted in the same manner as with the EA. The data is transformed into information, which is, in turn, formulated into a Preliminary Draft EIS for internal distribution to obtain comments. The PDEIS is usually prepared when the action has passed the EA procedural and preparation process. It may, under guidance by MAJCOM, be eliminated and the EPF may go directly to the DEIS. At a minimum, the EPFs, EPC, MAJCOM, and AFRCE should review the document. USAF/LEEV must also review and comment.

Environmental Impact Statements are to be analytical and concise, with only enough description of non significant issues to show why more study is not warranted. Length should reflect potential environmental problems and project size (CEQ regulations state that the text for items d through g below shall normally be less that 150 pages and for actions of unusual scope or complexity, less that 300 pages). Analyses of alternatives shall encompass those to be considered by the decisionmaker, including a complete description of the proposed action. The EIS is a means of assessing the environmental impacts of a

proposed action; it is not meant to justify decisions already made.

EIS Format

The following standard EIS format is recommended (40 CFR 1502.10) unless there is a compelling reason to do otherwise:

a. Cover Sheet

b. Summary

c. Table of Contents

d. Purpose and Need for Action

e. Alternatives Including Proposed Action

f. Affected Environment

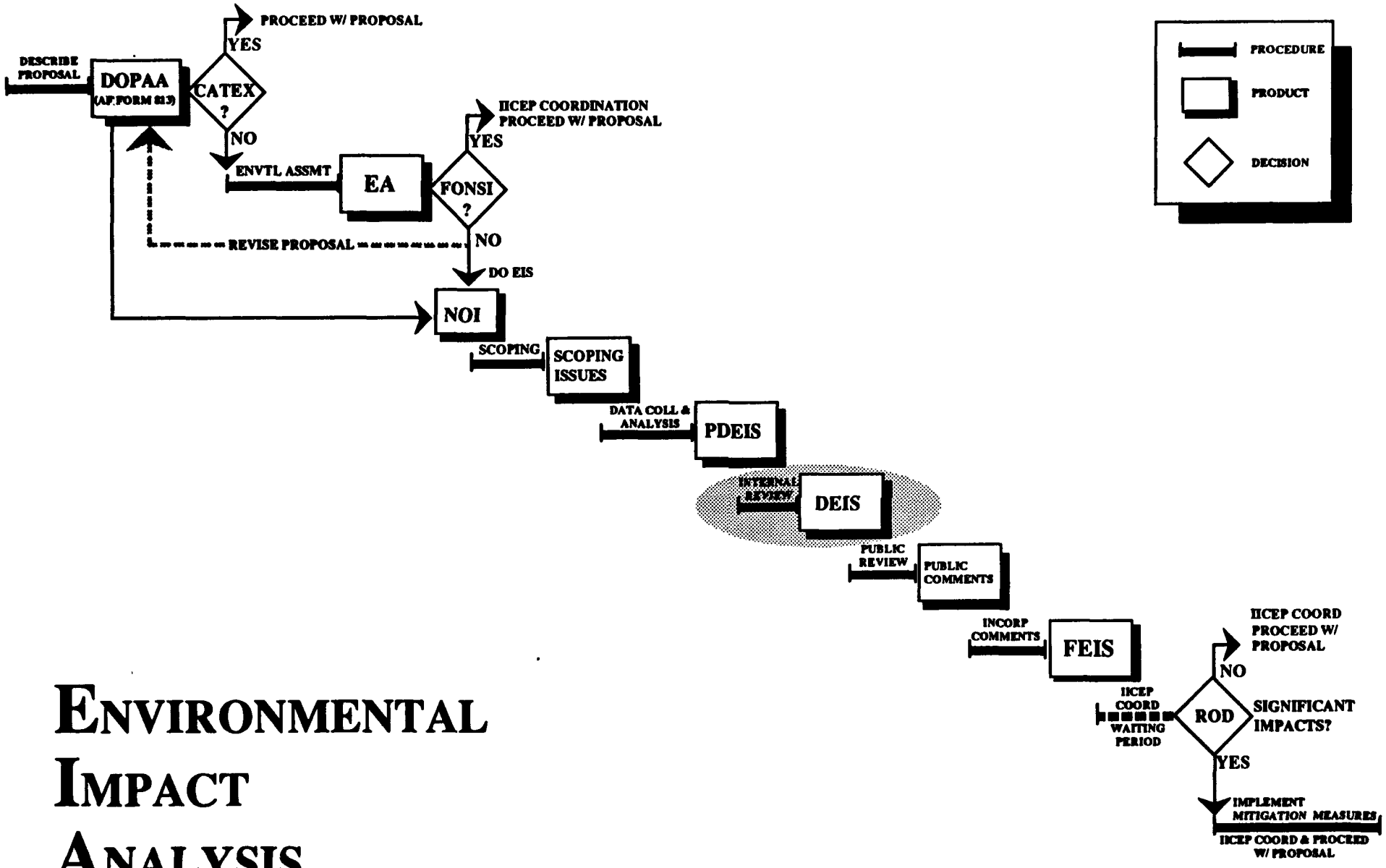
g. Environmental Consequences

h. List of Preparers

i. List of Agencies, Organizations and Persons to whom copies of the statement are sent

j. Index

k. Appendices (if any)

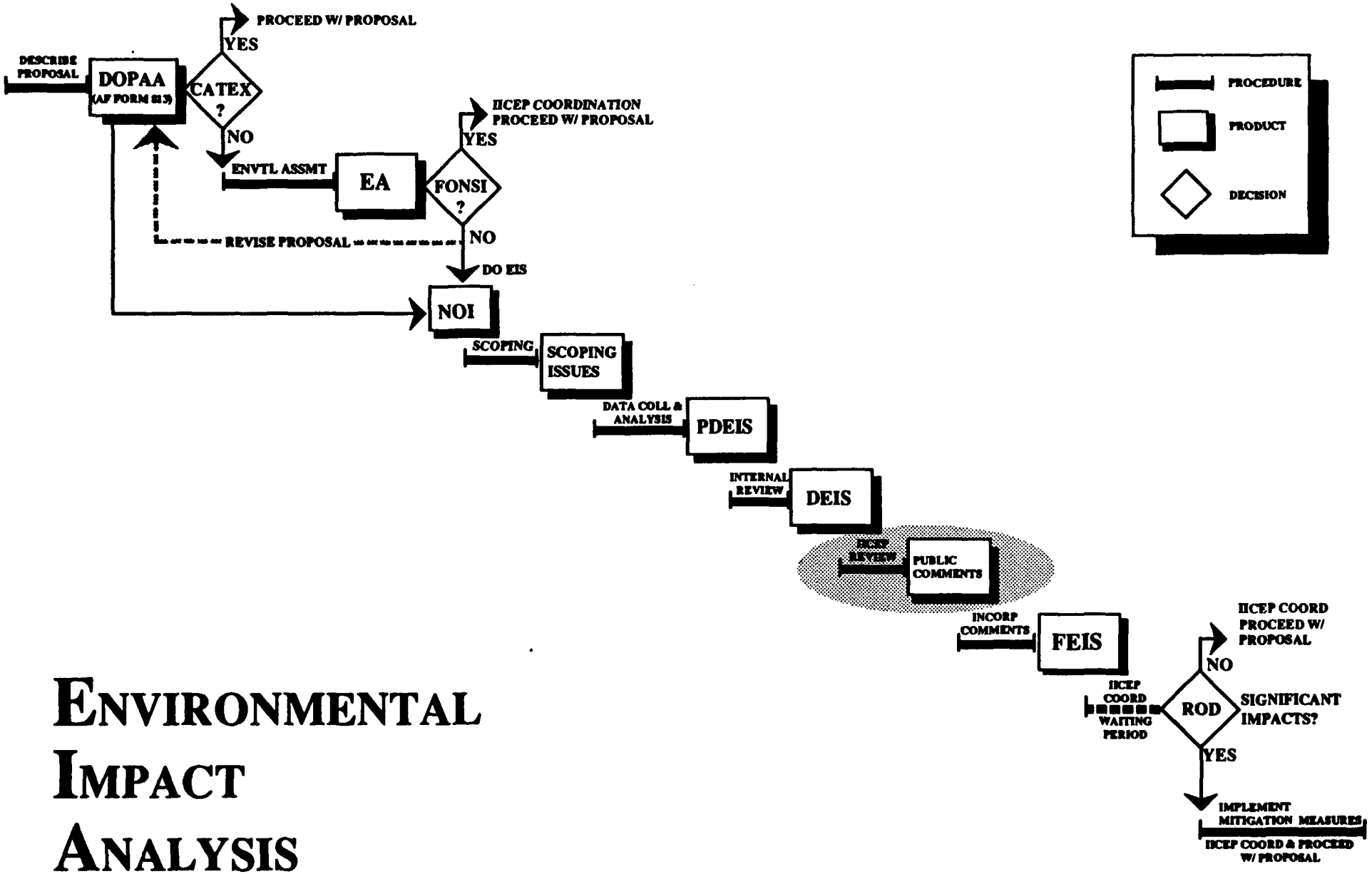


ENVIRONMENTAL IMPACT ANALYSIS PROCESS

DRAFT EIS

Draft Environmental Impact Statement (DEIS)

After the preliminary draft review is completed, the document is revised by the EPF and 20 copies of the DEIS should be sent to HQUSAF/LEEV for senior staff and secretariat review (SAF/RQ, SAF/GC, etc). When the review is complete, HQUSAF/LEEV will notify the EPF to print the DEIS in sufficient volume for distribution to the proper congressional delegations, staff agencies, and others on the distribution list. HQUSAF/LEEV then files the DEIS with the Environmental Protection Agency and the documents can be mailed out.



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

PUBLIC COMMENTS

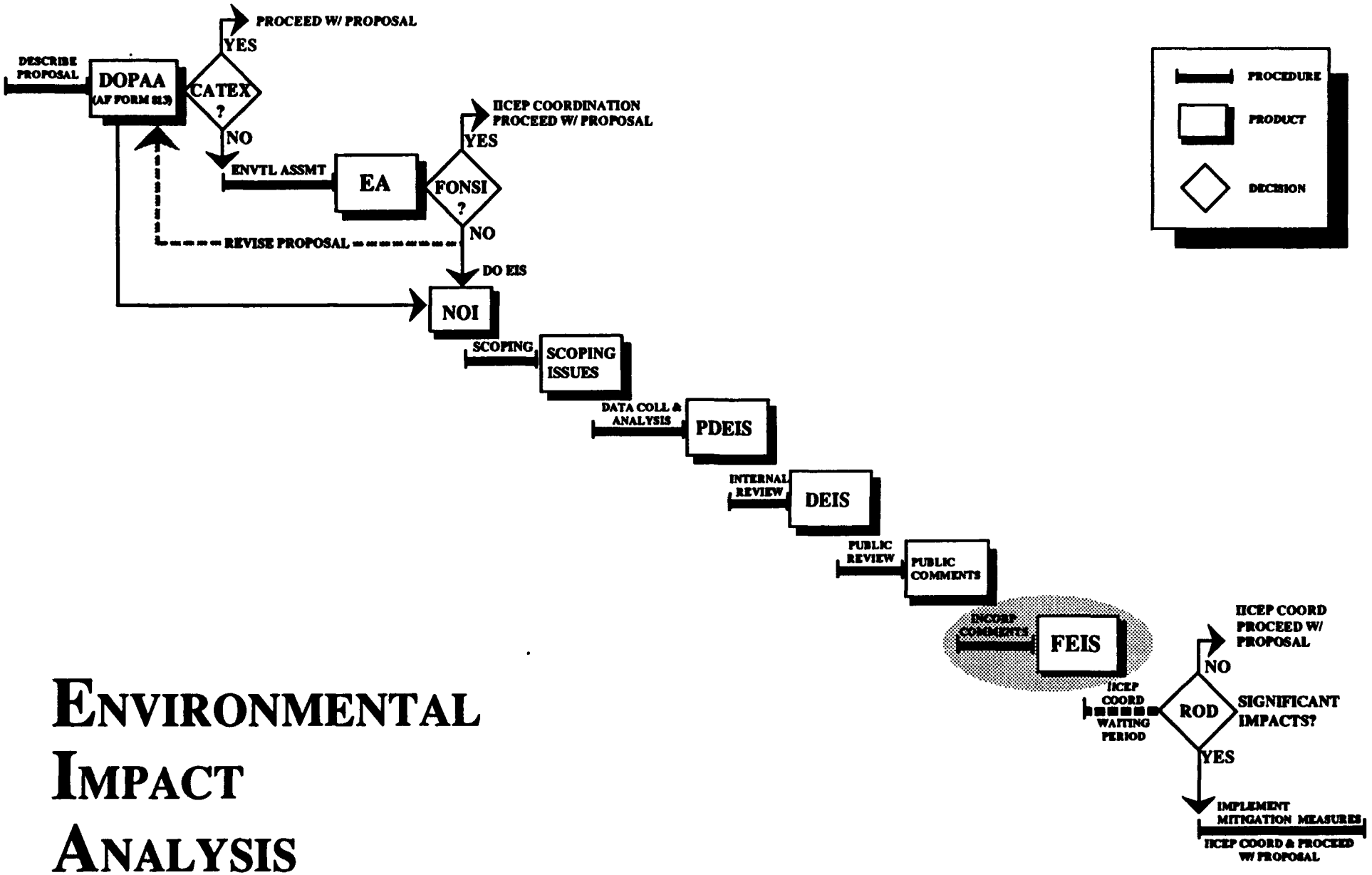
Solicitation of Public Comments on DEIS

When the DEIS is ready for public and agency review, notice must be put into the Federal Register regarding its availability and meeting schedule. Consistent with the CEQ regulations (40CFR 1506.9 and 1506.10), draft environmental impact statements are filed at the EPA Office of Federal Activities. The EPA publishes a weekly notice of availability (NOA) in the Federal Register of EISs filed with EPA during the preceeding week. This EPA filing notice starts the public review period for the draft EIS. The NOA should contain a description of the draft EIS, contact points for comments (usually the EPF), and meeting times and places if public hearings are held. The EPF then distributes the EIS to interested or affected agencies/individuals. The EIS must be distributed to certain entities, such as agencies with jurisdiction by law or special expertise in evaluating the environmental impacts involved. If the EIS is unusually long, a summary may be distributed to the public with an attached list of locations (such as local public libraries) where the entire DEIS may be reviewed.

The NOA should contain a description of the draft EIS, contact points for comments, and meeting times and places if public hearings are held.

If a draft EIS is to be considered at a public hearing, the agency should make the statement available to the public at least 15 days in advance. The hearings and comment period should be held within 45 days of the Federal Register notice, however the EPA can extend this limit to 60 days upon request. No decision on the proposed action can be made or recorded until 90 days after publication of the EPA's NOA for a draft EIS. To ensure all entities are involved, the IICEP process should be used for distribution of the document. HQUSAF/LEEV will notify and send the EIS documentation to the appropriate congressional delegations through SAF/LLP.

The CEQ guidance for public hearings is found in 40CFR1506.6 which states that an agency shall hold or sponsor public meetings or hearings whenever appropriate or required by statute. Public hearings are usually meetings with a presiding officer, preferably an administrative law judge. These hearings are usually conducted as non evidentiary hearings

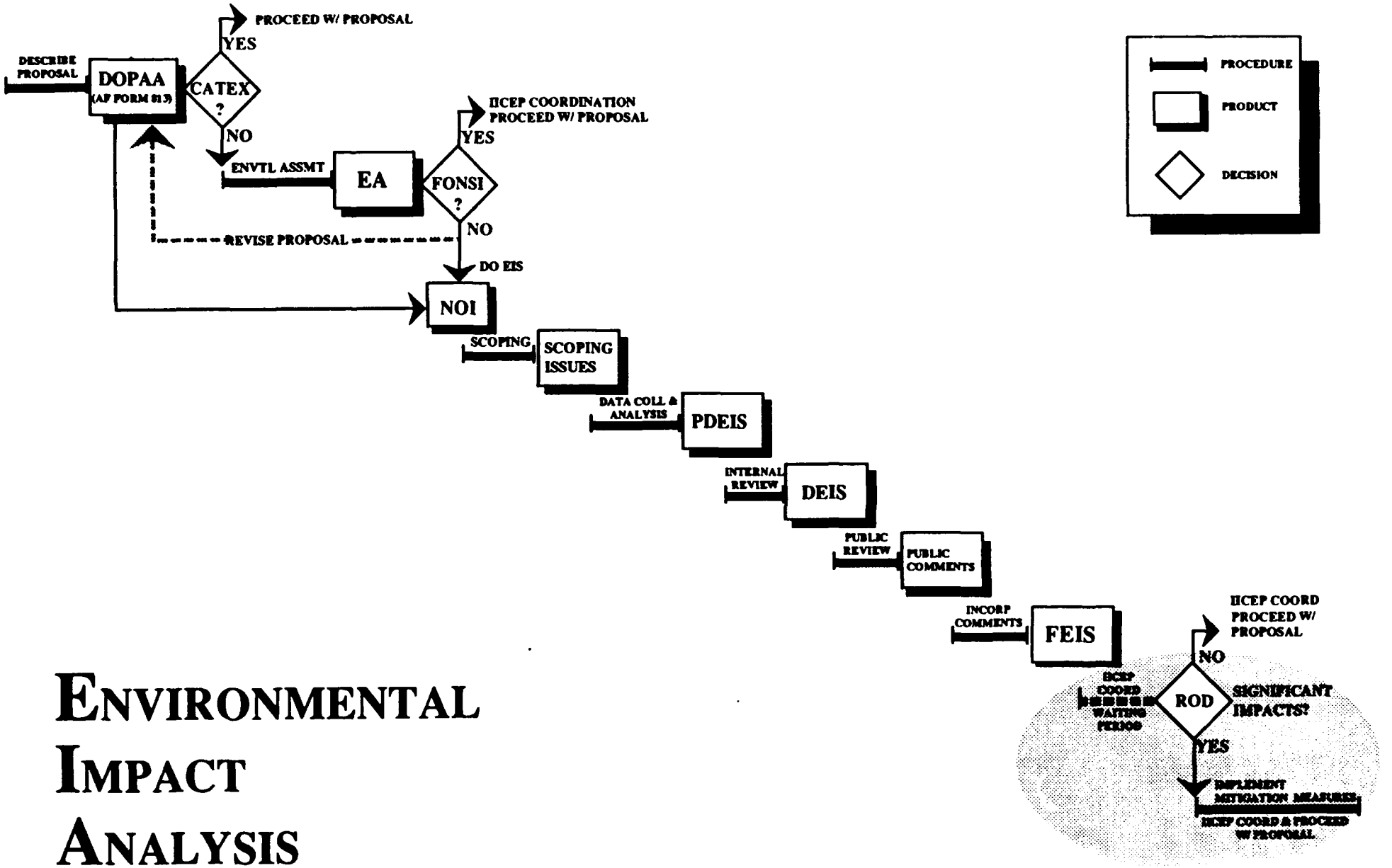


ENVIRONMENTAL IMPACT ANALYSIS PROCESS

FINAL ENVIRONMENTAL IMPACT STATEMENT

meaning those who make statements may not be cross examined by other speakers.

The presiding officer should open the public hearing, providing necessary background information and outlining the format of the hearing. The opening should be brief so that maximum time is available for public input. To ensure that everyone who wishes to speak has a chance to do so, time limits can be established. A recorder should be employed for the hearing, and a transcript should be made available as soon as possible after the hearing. Speakers should be encouraged to submit written comments.



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

ROD and MITIGATIONS

Incorporate Comments

If changes in the draft EIS are minor or limited to factual corrections, only a document that contains draft EIS public comments and responses, and an errata sheet of changes must be prepared and circulated. However, the entire document with a new cover sheet must be filed with EPA. If more extensive modifications are required, a preliminary final EIS (PFEIS) must be prepared incorporating these modifications. Responses to public comments must be as specific as possible. The PFEIS is normally sent through internal Air Force review procedures similar to those for the PDEIS. After review, both comments and responses must be included in the final EIS, usually as an appendix. The final EIS must be processed in the same manner as the draft EIS except that the public need not be invited to comment. No decision on the proposed action can be made or recorded until 30 days after publication of the EPA's NOA for the final EIS.

As a reminder, the FEIS should included all measures that are proposed to minimize or mitigate expected significant environmental impacts; responsibility for implementing measures in the mitigation plan that are approved by the decision maker; and availability to the public, on request, of the status of mitigation measures associated with the action taken.

Record of Decision (ROD)

The final procedure is the preparation and signing of a Record of Decision. In many aspects, the product is similar to a FONSI, however, it must be more clearly defined. The ROD, once prepared and signed, becomes a part of the FEIS and again must be announced to the affected public through the IICEP process. Included in this release or as part of the procedure, the Mitigation Plan (if applicable) should also be addressed with appropriate commitment of resources and time. The commitment should be made with guidance from MAJCOM and USAF/LEEV. The product must be filed with EPA. An example of a ROD for an airspace action is at Figure 4.

Proceed with Action

You may now proceed with the action as reflected in the Record of Decision (after signature of approving official). However, it is possible that as a result of the mitigative measures proposed and approved within the FEIS, a mitigation plan, permit application, letter of agreement, etc. may be necessary. The airspace proposal, accompanied by the environmental documentation is now ready for the formal FAA review and approval process.

DRAFT

RECORD OF DECISION

VALENTINE AND RESERVE SUPERSONIC MOAs

The 40th Tactical Fighter Wing (TFW) at Holloman AFB, New Mexico, needs to accomplish 1200 supersonic sorties per month in order to meet mission proficiency objectives. While the White Sands Missile Range (WSMR) is the first priority for meeting these requirements, only approximately 600 supersonic sorties per month can be accommodated at the WSMR over the long term. Up to 300 supersonic sorties per month will continue to be needed in both the Valentine and Reserve Military Operations Areas (MOA). After reviewing the Valentine and Reserve sonic boom validation study and environmental assessments (EAs) submitted in support of requests to continue supersonic operations in the two MOAs, I have decided to approve continued supersonic operations in the Valentine and Reserve MOAs.

On September 12, 1984, following completion of the final environmental impact statements (EISs) on this proposal, I announced a decision to begin flying up to 300 supersonic sorties per month in each of the two MOAs. These missions began, in stages, in January 1985.

The 1984 Record of Decision (ROD) approved supersonic operations in the two MOAs for a three year period. During this period, in addition to research and validation commitments, a number of operational restrictions were imposed. Also, if warranted, the Air Force agreed to make adjustments of operations to mitigate problems and/or initiate actions to explore expansion or adjustment of the MOA boundaries and relocation of the operational ellipses.

Figure 4. Example ROD

The supersonic flights by F-15 aircraft were limited to one specified portion of the Reserve MOA and two locations within the Valentine MOA. These 22 x 28 nautical mile (NM) elliptical areas approved for supersonic flight are considerably smaller than the areas originally proposed in the EISs.

The 1984 ROD acknowledged that there had been a great deal of public response to the Air Force's proposal to fly supersonic. However, the Air Force stated its belief that much of the concern resulted from uncertainty and that the actual impacts of supersonic flying would be much less than anticipated.

In the ROD the Air Force offered to participate with the States of Texas and New Mexico in cooperative research and monitoring to validate sonic boom predictions contained in the EISs. In cooperation with New Mexico a monitoring program was established in the Reserve MOA.

From April 15 to September 20, 1985, the Air Force conducted monitoring in the Reserve MOA with the assistance of the New Mexico Engineering Research Institute (NMERI). Analysis showed that, based on a projection of 300 sorties per month, the EIS predictions for number of booms generated, levels of overpressures and subsequent long term noise levels were probably overestimated. However, due to limitations on the number of sorties imposed, the database was limited. Consequently, NMERI recommended that further validation studies be conducted in an area that experienced a large number of supersonic flights and the area should contain aircraft tracking equipment to allow a statistical comparison of theoretical to actual results. In order to accomplish this additional study the provisions of the ROD were extended for the Valentine and Reserve MOAs.

WSMR was chose as the site for this study. A final report was issued in December 1989. During the six-month measurement period, 4600 Air Combat Maneuvering (ACM) sorties were flown, 72 percent of which were F-15s. A total of 506 ACM sonic boom events were recorded. Thirty-five automatic sonic boom

monitors were used. Each sonic boom was detected by an average of just under four of the monitors. WSMR has a nominal capacity of 600 F-15 sorties per month and is generally used at that capacity. The missions involved are the same type as those in the Reserve and Valentine MOAs and it is possible to project measurements at WSMR directly to these MOAs. The F-15 ACM operations at WSMR are the same as those originally proposed at Valentine and Reserve, i.e. without the ellipse constraint imposed in the ROD.

The WSMR study revealed that these aircraft are normally supersonic only about seven and a half percent of the time on the range. The WSMR study measured an average of 0.5 booms per day being heard at any one place on the ground as compared to 2-3 predicted in the EISs.

The results of these measurements were projected to planned supersonic operations at the Reserve and Valentine MOAs. Near the center of the supersonic area at the Reserve, a sonic boom would be heard an average of once every three days. At Valentine a sonic boom would be heard about once a week. The C-Weighted Day-Night Average Sound Level (CDNL) value at the center of the WSMR airspace was measured to be 52.4 decibels (dB). When projected to Valentine and Reserve, a CDNL value of 47 and 50 dB was derived respectively. This compares to the EIS projection of 58 dB for Valentine and 61 dB for the Reserve MOA. Typical overpressures are projected levels in the WSMR study were measured in the range of 0.8 to 1.0 pounds per square foot (psf). The same overpressures are projected to occur in Valentine and Reserve MOAs. This compares to an average of 2-3 psf projected in the EISs. ACMI tracking data from WSMR reveals that training operations there occurred in a 35 x 60 NM elliptical area. The 22 x 28 NM elliptical operating area imposed by the ROD is considerably less than the more optimal area originally requested in the EISs. This constraint has impaired usage of the Valentine and Reserve supersonic MOAs.

DECISION

I am convinced that the elliptical restriction in my 1984 ROD is no longer justified. The research report on Measurements of Sonic Booms Due to ACM Training at WSMR, and EAs in support continued supersonic operations in the two MOAs confirm the conclusions of the 1984 EISs that no significant impact is expected from the supersonic operations as originally proposed.

I am, therefore, allowing supersonic operations within the Valentine and Reserve MOAs as originally proposed. Subsonic flights will continue throughout the MOAs.

I have decided to grant authority to fly up to 300 supersonic sorties per month in each of the Valentine and Reserve MOAs. While approving these supersonic operations, I am continuing to restrict it by directing that measures be implemented to minimize sonic boom activity and mitigate sonic boom impacts and directing that actions be taken in the areas of research.

APPROVAL RESTRICTIONS

1. Supersonic flight in the Valentine and Reserve MOAs will be limited to:

   a. F-15 aircraft of the 49th TFW or aircraft specifically engaged in training with the 49 TFW aircraft,

   b. More more than 600 sorties per month with a maximum of 300 sorties in either MOA,

   c. Weekdays from 0700 to darkness (no weekends or holidays), and

   d. Altitudes above 15,000 feet mean sea level (MSL).

2. The WSMR will continue to be the first priority for supersonic operations. Within the constraints of overriding weather conditions, all remaining sorties will be divided equally between Valentine and Reserve MOAs.

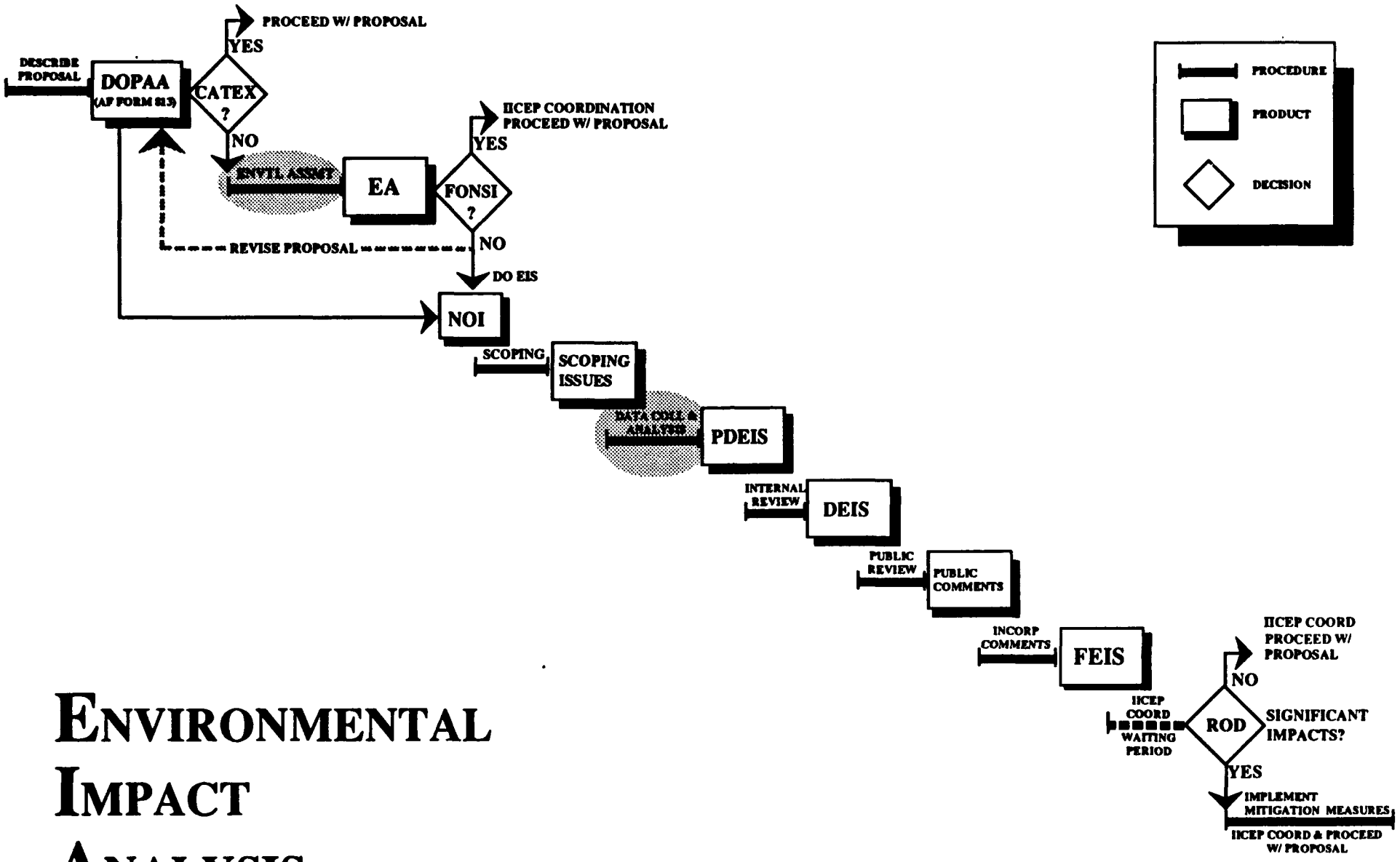
3. In no case will supersonic flight be allowed within five miles of the existing New Mexico towns of Reserve, Apache Creek, Horse Springs, or Aragon or the existing Texas towns of Valentine, Ruidosa and Candelaria. This restriction does not affect subsonic flight which is currently allowed throughout the MOAs.

4. All complaints and damage claims will be resolved promptly. Collect calls to Holloman AFB legal office will be accepted for complaints and claims reporting. If there should ever be a need, a damage assessment team could be on site within a matter of hours.

RESEARCH

The Air Force has a multiyear sonic boom R&D program. This Air Force-wide program, managed by the Human Systems Division of the Air Force Systems Command, continues to investigate sonic boom prediction models and the impact of sonic booms on humans, animals and structures. The results of this program will continue to be evaluated for their implications with respect to the Valentine and Reserve MOAs.

ANALYTICAL PROCESS



ENVIRONMENTAL IMPACT ANALYSIS PROCESS

ANALYSIS

ANALYTICAL PROCESS

Introduction

The environmental analysis and document must be "issue-driven" and analytic rather than encyclopedic. Based on the scope and degree of site specificity of the particular analysis, the agency, with help from the public, identifies those environmental, social, and economic impacts that might occur should the proposal be implemented.

Environmental impact analysis is essentially a comparison between the affected environment before and after the proposal has been implemented. To accomplish this comparison you need to isolate the components of the environment that are most likely to be affected by the proposal. As discussed earlier, these resource components include:

- Airspace
- Social
- Noise
- Native Americans
- Structures
- Wilderness and Parks
- Wildlife
- Livestock & Poultry
- Air Quality
- Health and Safety

For each of these resources you need to use a descriptor that will allow you to describe that resource as it exists before the proposal is implemented, and predict the change that the proposal will cause.

In some cases, determining the specifics of this relationship is relatively straightforward; a wetland habitat can be quantitatively described in terms of the number of acres. If the proposal calls for disturbance or destruction of some portion of that acreage, the impact of the project is quite easy to predict.

The social reaction to noise disturbance, on the other hand, is much more problematic. Reaction to noise disturbance is highly individual and very subjective. What one person finds highly

annoying, another might not even notice. Characterizing noise disturbance is a difficult social research challenge, because isolating the specific reaction to aircraft noise incidents is almost impossible. It is intuitively obvious that there is a relationship between some level of aircraft noise and annoyance; what is not obvious is the specific nature of the relationship and how it is influenced by other social variables.

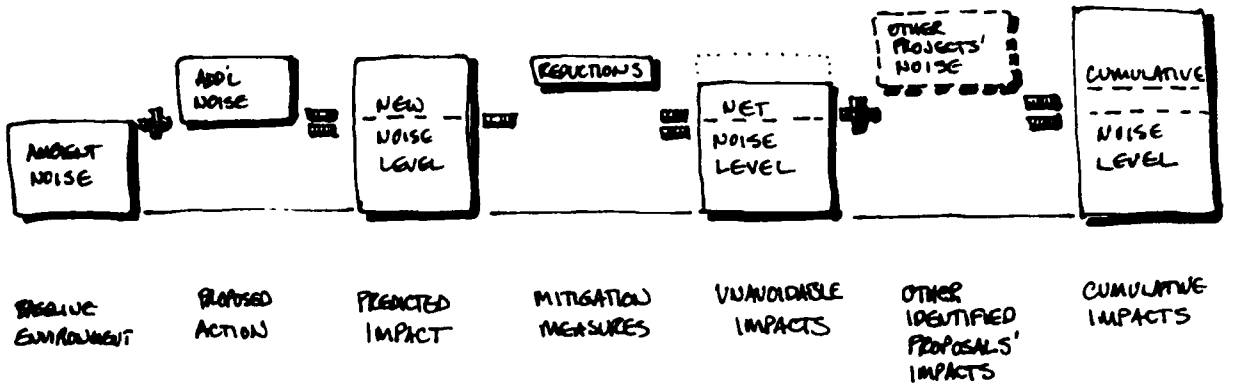
As illustrated in Figure 5, impacts can be additive or subtractive. For example, you can add noise or air pollution to the environment or you can disturb, or subtract, animal habitat or animals from the environment. Figure 6 schematically depicts the relationship of impacts from the proposed action, mitigation measures, and cumulative actions for each of the resource areas.

The analytical sequence for each individual resource is somewhat complicated, and as Figure 6 demonstrates, assessing all the changes in all the resources is even more complicated. The best way to tackle a complicated problem is to break it down to its smaller, simpler components and solve them sequentially. The analytical process itself (Figure 7) will be described and applied to each resource.

The purpose of the analysis is to determine if there are significant impacts caused by the proposal. To make this determination, a threshold level is required. This threshold is described in terms of the descriptors (acres of disturbances, annoyance) that allow you to discern the change caused by the proposal. The criteria for determining significance for each resource and the descriptors or performance measures should be defined before data collection begins.

Data collection should be undertaken to discover only that information required to make the determination of significance, no more or less. Knowing the performance measures or descriptors before you begin data collection allows you to go for the discriminators and ignore irrelevant data.

Assessment of the change in the environment is at the heart of the process. This can only be done when the affected



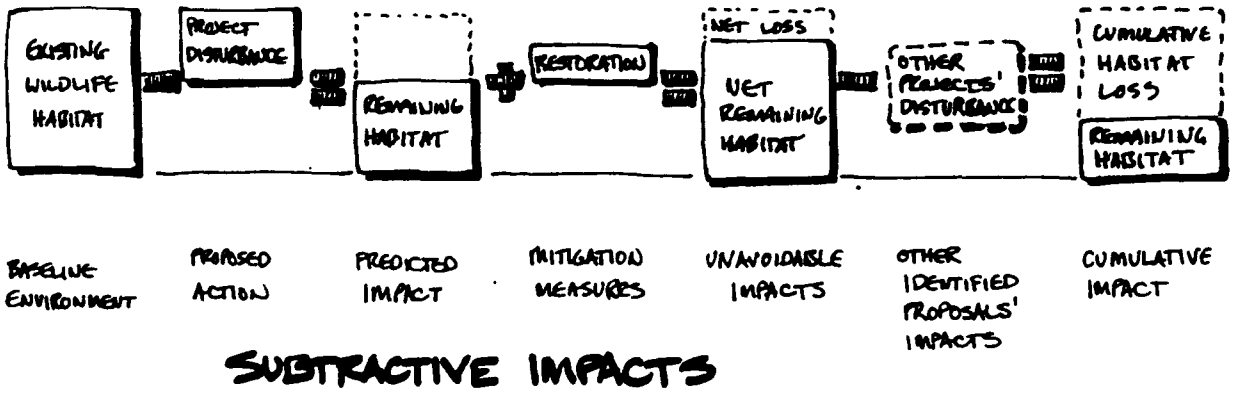


Figure 5. Additive and Subtractive Impacts

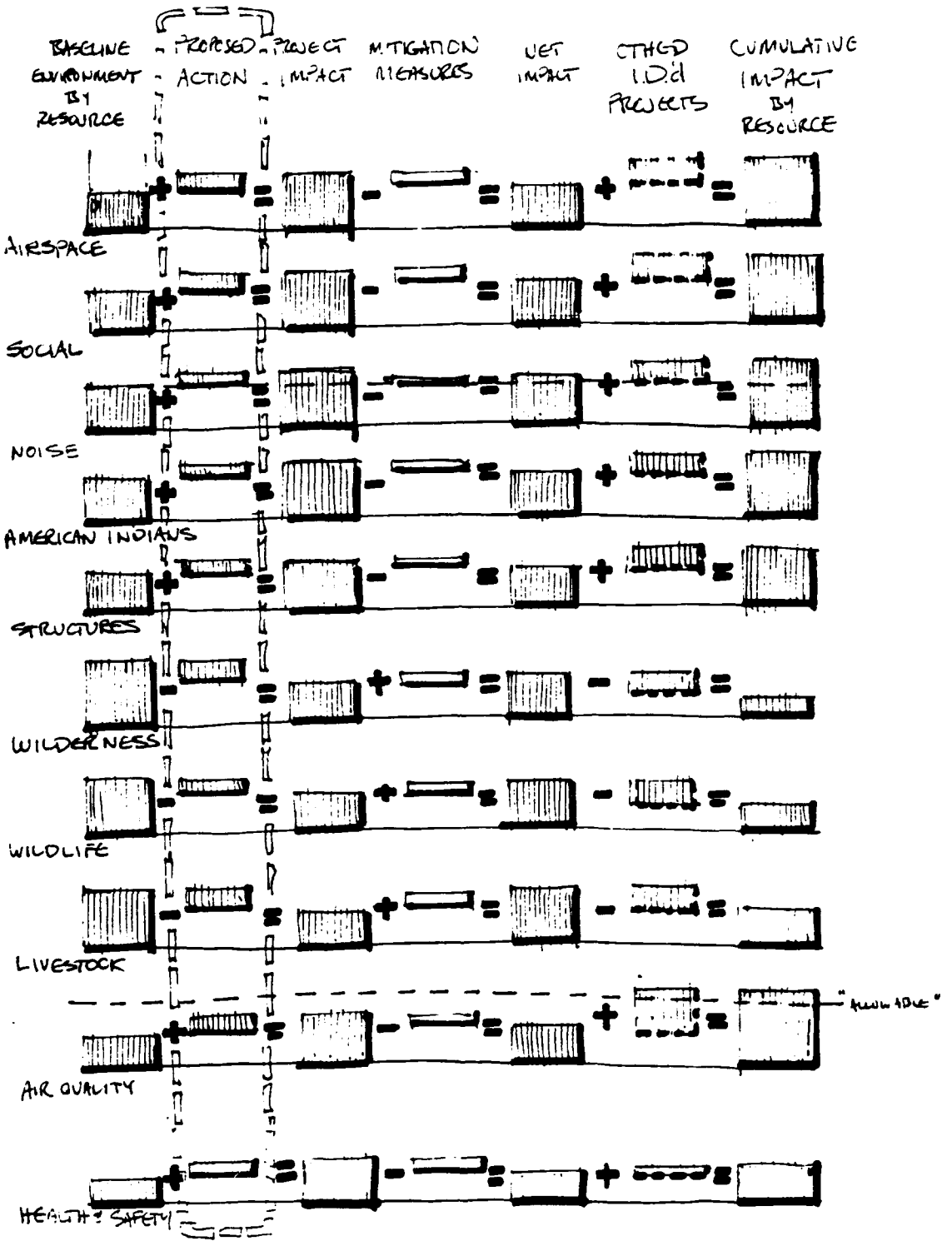


Figure 6. Impact trends for all resources

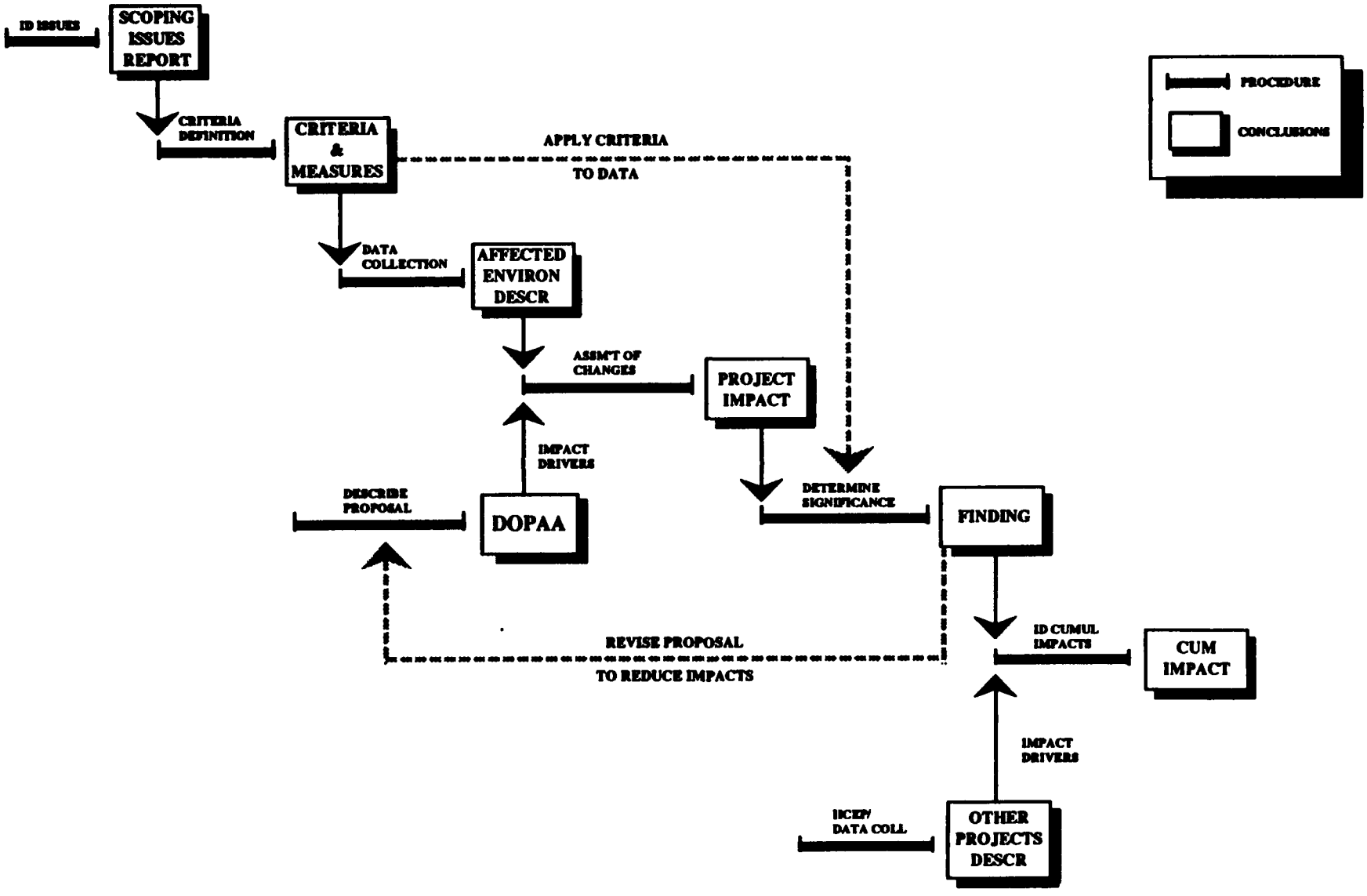


Figure 7. The Analytical Process

environment and the proposed action are described in the same terms or performance measures. This is when your intimate understanding of the proposed action is indispensable. You need to understand both the sensitive receptors in the environment and the impact drivers in the proposed action.

Some of the changes are fairly straight forward and easy to quantify, e.g., habitat disturbance in terms of acreage. Other changes require sophisticated modeling or simulations to allow predictions of impact on the sensitive receptors in the environment. Those models will be described.

Performance Criteria

Table 1 summarizes the impacts and respective performance measures, in general terms, for each of the resources so the analyst can focus his data collection efforts

Data Collection

For each resource area you need to understand the environment in quantifiable terms. This is the data collection stage. It is not coincidental that one of the best sources of information about the resource areas is the individual agency stewards of each resource. These people with whom you must coordinate also have some of the best information on their respective resources. Universities in the region usually have both experts and libraries that are excellent sources of information about the various resources.

It is not coincidental that one of the best sources of information about the resource areas is the individual agency stewards of each resource.

Environmental data must be compiled for it to become useful in analysis. One useful compilation medium is mapping. The geographic extent or specific location of a resource is essential information. Graphic conventions can also allow display of quantity or density of that resource on a map as well.

The proposed action should also be mapped at the same scale as the resources. This allows you to make the first evaluation; is the proposed action anywhere near the sensitive resources? If not, there need be no further analysis for that resource. If the proposed action is near the sensitive resources, then more analysis of the degree of impact is required.

ENVIRONMENTAL ISSUES	PERFORMANCE CRITERIA	UNIT OF MEASURE
1. Airspace		
Restriction on civilian or joint use of airspace.	Number of restricted operations as determined by FAA; economic impact of restrictions.	Number; dollars.
2. Social		
a. Increases in existing noise levels.	Change in noise levels created by project; increase over ambient and acceptable levels.	Ldn, Ldnmr, SEL.
b. Exposure of people to noise levels.	Noise increase; number of people exposed.	Number.
3. Noise		
Exposure of people to potential health hazards (severe noise levels).	Noise increase; number of people exposed.	Ldn, Ldnmr; number.
4. Native Americans		
Restricting Native American religious or sacred uses.	Consultation with Native Americans to identify lands used for religious economic, or sacred purposes; acres of land restricted from Native American religious, economic, or sacred purposes; compliance with American Indian Religious Freedom Act.	Acres.

Table 1. Environmental Impacts and Performance Criteria

ENVIRONMENTAL ISSUES	PERFORMANCE CRITERIA	UNIT OF MEASURE
5. Structures		
a. Adverse physical effects to a prehistoric or historic building, structure, or object.	Aircraft type and activity; inventory of prehistoric or historic buildings, structures, and objects; eligibility to National Register of Historic Places (NRHP); compliance with section 106 of National Preservation Act.	Aircraft type; annual sorties, altitude; number of structures; probability of damage.
b. Adverse physical effects to conventional structures and landslide/avalanche prone areas.	Aircraft type and activity; inventory of structure types (land use) and sensitive geographic areas.	Aircraft type annual sorties, altitude; number of structures/ sensitive areas; probability of damage.
6. Wilderness and Parks		
Impact upon the quality and quantity of existing recreational opportunities.	Aircraft activity; noise levels; inventory of recreation opportunities; change in number of visitors; acceptability by affected population; consultation with agency officials.	Aircraft sortie rates, Ldn, Ldnmr, SEL; visitor rates; number of wilderness areas, National Parks/Monuments; acres impacted; projected land mangement flight activity; qualitative evaluation.
7. Wildlife		
a. Reduction of the numbers of any unique, rare, or endangered species of animals.	Aircraft activity; noise levels, number of animals reduced; acres of habitat lost or disturbed; conformance with applicable laws or regulations, e.g., Section 7 of Endangered Species Act. Consultation with agency officials.	Aircraft sortie rates, altitude; Ldn, Ldnmr, SEL; number; acres.

Table 1. (Cont)

ENVIRONMENTAL ISSUES	PERFORMANCE CRITERIA	UNIT OF MEASURE
b. Change in the diversity of species, or numbers of any species of animals.	Reduction in number of animals by species; acres of ecological habitat lost or destroyed; changes in behavioral patterns of animals.	Number; acres.
c. Deterioration of existing wildlife habitat.	Acres of habitat lost.	Acres.
8. Livestock and Poultry		
Disturbance to domestic livestock/poultry operations.	Aircraft activity; noise levels; amount of domestic operations affected; economic value of lost productivity.	Aircraft sortie rates, altitudes; SEL; number of animals affected; dollars.
9. Air Quality		
Substantial air emissions or deterioration of ambient air quality.	Aircraft type and activity; amount of criteria pollutants (NO_2, SO_2) and particulate matter discharged over Class I areas; allowable atmospheric concentrations under Prevention of Significant Deterioration increment standards.	Sortie rates, units of concentration, generally micrograms per cubic meter.
10. Health and Safety		
a. Exposure of people to risk from aircraft operations.	Probability of mishaps; BASH potential; number of people exposed; conformance with FAA and AF flying/safety regulations.	Fractional value of probability; BASH probability; number.
b. Exposure to potential health hazards from radio-frequency emissions, laser systems, flares, or chaff.	Probability of exposure; number of people exposed.	Fractual value of probability; number.

Table 1. (Cont)

Assessment of Changes

You are now ready to conduct the analysis. While getting to this point may have seemed tedious and detailed, your probability for success in conducting an adequate analysis is greater.

In conducting the analysis, you need to know how you will evaluate impacts by resource category. That is, you need to know what are the intrusive characteristics of low altitude flying operations that drive the impacts for each resource category.

In an effort to quantify these impact drivers, there have been some findings during the course of the GEIS that can be used to help focus the analysis. Some impacts have been identified as not being significant and therefore need not be assessed in detail in future EAs/EISs. The following impacts are summarized for each of the resource areas:

Airspace

- *Low altitude airspace proposed by the Air Force is* approved and managed by the FAA. The airspace proposal undergoes critical review (in both informal and formal stages at the FAA HQ level for rule making SUA; at the FAA regional level for all others for accuracy and interface with the National Airspace System (NAS). Compatibility with the existing Instrument Flight Rule (IFR) system and FAA Air Traffic Control (ATC) facilities is determined.

- Military Training Routes (MTRs) are usually deemed by the FAA to have a negative impact on the public's access to the navigable airspace since joint use by civil and military users is managed by the FAA air traffic control system. An Instrument Route (IR) MTR requirement is coordinated with FAA. IRs are always scheduled with FAA ATC prior to use. A Visual Route (VR) MTR requirement is validated by the Air Force and Visual Flight Rules (VFR) conditions apply. VR usage is always scheduled with FAA ATC. Slow speed low altitude training routes (SR[illegible] involve VFR operations in

accordance with all Federal Aviation Regulations. SR usage is always scheduled with FAA ATC facilities. Airspace proposals for VRs or SRs do not require FAA approval but informal airspace coordination is accomplished, EIAP documentation is certified by the FAA, and usage is coordinated among the Air Force and FAA.

- Non rule-making special use airspace (MOAs) is designed to separate military training activity from nonparticipating IFR traffic during periods of use. Joint usage by civil and military aircraft is managed by the FAA air traffic control system. Civilian usage is not prohibited during periods of nonuse by the military. Non rule making special use airspace above 3000' AGL may have varying degrees of impact on civil aviation operations.

- Rule making special use airspace (Restricted Areas) is designed to segregate hazardous military activities from non-participating civilian aircraft. This type of airspace is most restrictive to civil aviation. Rule making SUA may impact civil aviation by presenting obstacles, real or perceived, which prevent pilots from flying directly from one point to another. SUA in certain areas may cause the compression of air traffic during period of heavy demand and can result in delays, either at the point of origin or at some point prior to destination. It must be noted, however, that SUA is only one of a number of possible factors affecting traffic flow that include: airline hubbing decisions, airport facilities, runway capacity, airline flight scheduling procedures, weather conditions, and geography. SUA may limit air carrier options for planning and flying direct routes.

Social Impacts

- People may express annoyance and report disruption of activities such as conversation and sleeping. Based on field survey results, it is estimated that approximately 25-40% of individuals underneath low altitude airspace

will report being highly annoyed by some aspect of flying operations.

- Formal complaints concerning low altitude flights are seldom made.

- People are highly annoyed by the possibility of crashes and the low altitude of flights about as often as they are highly annoyed by aircraft noise.

- Age, perceived altitude of the flights, and support for the military are related to impacts such as annoyance and interrupted activities.

- Instantaneous noise levels, airspace type, aircraft type and number of sorties also are related to impacts, but not as strongly as the social factors mentioned above.

- In the overall context of people's lives, low level flights apparently are a relatively minor disruption.

Noise

- There is insufficient evidence to infer significant risk of birth defects or other adverse reproductive outcomes from noise.

- Noise may exacerbate existing conditions of hypertension. However, the threat of aggravating hypertension prevalence levels from low altitude flying is negligible, with the possible exception of airspaces with intense activity levels (e.g., restricted areas).

Native Americans

- The sovereign status of Indians is a sensitive issue and dealings with tribes need to be conducted in a way that preserves sovereignty.

- Religious ceremonies and religious sites may be affected if ceremonies are disrupted or sites desecrated as a result of noise or visual intrusion.

- Disruption of subsistence activities (hunting and herding) may cause economic hardship or other difficulties.

- Fears and negative perceptions among the elderly may cause adverse family and tribal impacts because of tight kinship structure.

Structures

- Except under the most unusual circumstances such as 24000 annual sorties of bomber aircraft at 200 ft AGL or heavy helicopters at 50 ft AGL, impacts on structures or the possibility of landslides/avalanches are negligible and are less than those from most natural or human causes such as weather or building occupancy.

Wilderness

- Solitude of users may be disrupted by noise or visual intrusion.

- Viewing, photographing, or hunting of wildlife may be affected adversely.

- Wilderness caretakers may be hindered in performing their duties.

- In general, these noise or visual impacts are not serious in comparison to mining, timbering, cattle grazing, and other consumptive impacts.

Wildlife

- No research has been conducted and no literature is available to determine whether wildlife populations under military airspaces have declined due to low level aircraft operations.

- Although some wildlife show fright responses to low level aircraft, existing literature suggests that their survival and reproduction in most cases are not affected significantly and that their population levels largely are unaffected.

- The reproductive season is the season when potential impacts are of greatest concern.

- Impacts on threatened and endangered species potentially are significant due to the already low population levels of these species.

Livestock and Poultry

- Livestock and poultry that are confined appear more susceptible to effects of low flying aircraft than free-roaming individuals.

- Available evidence indicates that low flying aircraft only rarely cause mortality to livestock and poultry that result in economic losses to farmers.

- Confined turkeys sometimes pile up and suffocate, but piling up and significant mortality in chickens have not not been reported.

- Studies indicate that chicken growth, egg-laying rate, reproductive function, and egg hatchability are not affected by low level aircraft.

- No impacts of subsonic low level flight have been reported for dogs, mink, pigs, horses, sheep, or free-roaming cattle and dairy cows, although the latter four have been reported to show brief fright responses.

- Milk production in dairy cattle near airfields was unaffected by the flights.

- Cattle in corrals and feedlots may stampede as a result of low altitude flights, injuring themselves and causing damage to fences.

Air Quality

- Air pollutant impacts for all low level military airspaces are negligible with respect to National Ambient Air Quality Standards and Prevention of Significant Deterioration (PSD) Class II increments.

- Air pollutant impacts from MOA and RA operations are negligible with respect to PSD Class I increments.

- Engine emission impacts to visibility are negligible for all types of aircraft.

- MTRs passing over PSD Class I areas (certain national parks and wilderness areas) may be a concern.

Health and Safety

- The effects of exposures to nonionizing electromagnetic fields or laser systems are likely to be negligible.

- Low level mishap rates of 1.5 per 100,000 flying hours are at the low end of the Air Force-wide average of 1.5-3 mishaps per 100,000 flying hours for all types of flying operations.

- Risks of civilian property damage, injury or death are extremely negligible.

Given your knowledge of the proposal, the area, the results of modeling, the resource categories and their sensitivities, and input from others, you are ready to make predictions. All resources can be assessed either in quantitative terms, or binary (yes/no). Do that first! In quantative terms calculate the noise and emissions increase (from modeling). Then do the yes/no part; do you overfly people, Indian reservations, wilderness areas, T&E species, livestock operations, etc. If the answer is yes to any or all of these, you need to start thinking about the amount of exposure to a sensitive receptor (i.e., number of people, acreage of Indian land or wilderness area affected, etc.).

Screen Federal environmental statutes as early as possible

An initial screening of Federal environmental statutes and regulations should be conducted as early as possible to enable all environmental requirements to be included in overall project planning and data gathering. Compliance with Federal environmental statutes and regulations particularly those with review requirements is necessary as these requirements may affect implementation of a proposed action. These related environmental review requirements should be addressed in, or coordinated with, NEPA review requirements. The CEQ regulations state that agencies shall integrate the requirements of NEPA and other planning and environmental review procedures required by law or agency practice so that the procedures run concurrently rather than consecutively (40CFR1500.2). The most applicable Federal statutes that apply to airspace analysis include:

- Endangered Species Act of 1973 (Section 7)
- National Historic Preservation Act of 1966 (Section 106)
- American Indian Religious Freedom Act of 1978
- Wilderness Act of 1964
- Wild and Scenic Rivers Act of 1968

Now that you are familiar with the performance measures and have characterized the existing environment it is time to begin assessing the potential impacts resulting from the proposal. The process begins by modelling the noise and air quality impacts.

Noise Models

To determine, one dimensionally, what the noise impacts are, requires modeling the proposal using either ROUTEMAP or NOISEMAP programs on an IBM compatible PC, preferably outfitted with a math coprocessor. Noise modeling involves a mathamatical prediction of the level of noise that might be perceived at a point as a result of overflight of the described type and number of aircraft at a described altitude. ROUTEMAP predicts the noise environment for Military Training Route (MTR) type airspace operations and can be obtained from AAMRL/BBE at Wright-Patterson AFB. NOISEMAP predicts the noise environment for airbase/airport type operations and can be used in modeling air-to-ground operations typically conducted in restricted airspace over weapons ranges and air to air operations conducted in the MOAs. NOISEMAP modeling can be conducted by AFESC/DEV at Tyndall AFB. Remember to input not only your proposal, but concurrent activities from existing intersecting airspace as well. As part of this effort, you should perform some trade-off analysis to see what happens as the flight variables (i.e., altitude, power settings, speed, etc.) change. AFESC/DEV at Tyndall AFB. Remember to input not only your proposal, but concurrent activities from existing intersecting airspace as well. As part of this effort, you should perform some trade-off analysis to see what happens as the flight variables (i.e., altitude, power settings, speed, etc.) change.

Air Quality

A key GEIS finding with respect to air quality was that the impacts of all low altitude airspaces were negligible with respect to National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) Class II concentration increments. Another GEIS finding was that air quality impacts from aircraft flying in MOAs and RAs were generally negligible with respect to PSD Class I concentration increments . Therefore, the

only low altitude airspace proposals requiring a quantitative air quality impact analysis are those in which MTRs pass over a PSD Class I area (specifically designated national parks and wilderness areas), or MOAs, RAs, or other airspaces that would contain very concentrated flight activity (similar to MTRs) and which would occur over a PSD Class I area. The Multiple Aircraft Instantaneous Line Source (MAILS) atmospheric dispersion model has been developed for estimating ground-level air pollutant concentrations resulting from low altitude MTR or MTR like flying operations. The MAILS model has an integrated aircraft emissions database and is an interactive, user-friendly modeling tool, allowing the assessment of several aircraft in a single model run per pollutant. Technical information and advice on air quality models can be obtained from AFESC/RDVS at Tyndall AFB, Fl.

Analysis procedures

Once the noise and air quality modeling are completed, the planner can begin to determine actual levels of impact. Use the following procedures to guide your analysis operation. They are listed by resource for convenience.

Airspace

1. Describe completely the operational details of the proposed flight profile to include access/egress and activity within the airspace. Identify all existing airspace and utilization in the vicinity of the proposed airspace. Describe scheduling procedures that ensure compatible use of shared low altitude airspace.

2. Describe briefly the Air Force and FAA aeronautical process for developing low altitude airspace proposals and FAA's management of airspace that ensures safe and compatible air operations within the National Airspace System.

3. Review all aeronautical charts (1:500,000 VFR Sectionals, IFR/VFR wall planning chart), DOD FLIPs (obtained from Base Ops), and Airport Directories with the intent to survey, gauge, and minimize impacts to airways, VFR flyways, airports, and any air traffic control facility operation.

4. Airspace proposals for MOAs and RAs should result in documentation of potential impacts to civil aviation through consultation with the AFREP residing in the FAA Regional offices.

5. Coordinate with the Department of Interior (DOI) and Department of Agriculture (DOA) airspace points of contact to prevent possible conflict with land management/wildlife survey/fire detection and fighting flight activity. Provide scheduling responsibility and projected usage information to the appropriate agency.

Social

1. Obtain information on population distribution, size, and age of residents below proposed airspace and alternatives from aeronautical charts, state/county planning offices, county tax offices, etc. Identify population centers, small towns, settlements, schools, hospitals, medical facilities, and commercial livestock operations.

2. Gauge community support for the military by reviewing local newspapers, base public affairs records, previous airspace EA/EIS documentation for the same vicinity, and scoping comments from local officials, affected agencies, and the public.

3. Compute the projected noise levels in Ldnmr/Ldn and SEL using computer models ROUTEMAP/NOISEMAP for the proposed action and alternatives. Incorporate existing flying operations in concurrent airspace if appropriate. NOISEMAP modeling generates Ldn noise contours for the area. ROUTEMAP modeling generates Ldnmr noise levels at the centerline of the MTR and at prescribed distances offset from the centerline. ROUTEMAP can be modified to compute SEL levels for any aircraft operation. Consult AAMRL/BBE for specific application.

4. Rank the relative degree of social impacts (annoyance, interrupted activities, and community disruption) using the relationships presented in Table 2 for the proposed action and alternatives. For example, the positive relationship between

Key factors associated with social impacts[1]			
Key characteristics	Annoyance	Interrupted activities	Community disruption
Social characteristics			
Perceived altitude of flights	Sig.	Sig.	None
Support for military	Neg.	Neg.	Neg.
Support for overflights	Neg.	Neg.	None
Presence of young	Pos.	Pos.	--
Presence of elderly	Neg.	Neg.	--
Population density	None	None	Neg.
Fear of crashes	Pos.	Pos.	N.S.
Interrupted activities	Pos.	Pos.	N.S.
Noise characteristics			
LDN	None	None	Pos.
SEL	Pos.	Pos.	None
Exposure characteristics			
Airspace type[3]	Sig.	Sig.	Sig.
Aircraft type[4]	Sig.	None	Sig.
Total number of sorties	None	Pos.	Pos.
Number of concurrent segments	None	None	Pos.

[1]Pos. = Positive statistically significant relationship, from simple regression analysis.
Neg. = Negative, statistically significant relationship, from simple regression analysis.
Sig. = Statistically significant relationship, from Analysis of Variance-direction not indicated.
None = No statistically significant relationship
-- = Not tested.
[2]Airspace type includes relationship for airspace type alone and for the number of sorties by airspace type.
[3]Aircraft type includes relationship for aircraft type alone and for the number of sorties by aircraft type.

Table 2. Key factors associated with social impacts

interrupted activities indicates that for any given locations, whichever proposed activity generates the highest SEL will also generate the greatest impact.

5. Social impacts related to reduced productivity for commercial livestock operations and disturbance of sensitive medical/educational facilities can be estimated from the number of receptors under the proposed area and the frequency and noise levels of the flying operations.

6. Based on GEIS findings, it is estimated that 25-40% of people living under low altitude airspace will be highly annoyed with some aspect of the flying activity (noise, fear of crashes, altitude, etc.) The magnitude of the annoyance, judged by the extremely low percentages of formal complaints, can be expected to be minor.

Noise (Human Health)

1. Describe the existing noise environment and the estimated increase in the noise environment as a result of the proposed action.

2. If the noise environment computed previously in the Social Impacts analysis is greater than 75 dB (Ldnmr or Ldn), and receptors are underneath the proposed airspace, the relative risk estimate with respect to hypertension is high enough to warrant consideration as a significant level of impact.

3. The locations of sensitive health receptors (hospitals, retirement centers/communities, etc.) as determined through scoping and data collection efforts should be protected from heavy flying activity (i.e., MTR centerlines).

Native Americans

1. Use aeronautical charts or land status maps to determine the presence and boundaries of Indian lands under the airspace. If you believe Indian lands may underlie the proposal, contact the appropriate BIA Area office (See Directory Section) for the Indian Land Area map. The POPULATION AND LABOR

FORCE ESTIMATES publication may also be obtained from this office and provide useful data.

2. Contact the BIA area office to determine how to locate local tribal officials in that area. As part of your initial scoping you have sent a letter, accompanied by a map showing the proposed airspace and a description of the proposed activities, to the tribal chairman, pueblo governor, or village chief. You have asked if the Indian leaders if they perceive potential problems from low level flights and what the specific nature of the problems might be.

3. Visit the affected tribes to gather data. Consult with BIA staff prior to the site visit. Review initial scoping responses and make sure nothing is missed. Use the questions listed in Table 3 as a guide for your discussions.

4. Categorize the concerns raised by tribal leaders, members, and BIA officials according to Table 4.

Structures

1. Very few conditions of subsonic low altitude flying operations are capable of producing vibratory loading sufficient to cause more than negligible impacts to structures or increase the probabilities of landslides/avalanches.

- If the proposed action involves aircraft other than bombers (B-1B, B-52) or heavy helicopters (CH-3C, CH-47D, CH54B, HH-53G), no impacts will result for any altitude.

- Bomber or helicopter operations at 500-600 feet AGL will result in a very small probability of damage.

- 4000 annual sorties of bomber operations at 200 feet AGL within a prescribed corridor will result in a small probability of structural damage to conventional and historic structures.

- Heavy helicopters at 50 feet AGL will result in some probability of structural damages to structures and landslide/avalanche occurance (see Table 5).

Sovereignty

- Have there been complaints or concerns regarding military activities?
- What kind of relationship has the tribal government had with the Air Force?

Religion

- Does your tribe observe meditation, prayers or ceremonies which could be disturbed by Air Force activities?
- What happens if these were disrupted by Air Force activities?
- Are there sacred locations -- both on and off Reservation -- where holy people or other entities may be affected?

Economy and Subsistence

- What kinds of activities such as hunting, herding, planting or gathering do tribal members participate in throughout the year?
- Could these be affected directly by Air Force activities?
- Could sacred activities associated with them be affected?
- Are there economic development activities sponsored by the tribal government which could be affected by Air Force activities?

Family Quality of Life

- In what ways have Air Force activities affected the peace of mind of some of the elderly, children, or others living in the area?
- What kinds of concerns have these people mentioned?

Table 3. Recommended questions for Native Americans

Impact type	Negligible	Low	Moderate	High
olitical and economic sovereignty	Impacts to the tribe's governmental legitimacy, political credibility, and corporate/ economic viability are not indicated as a problem by tribal officials or elders	Temporary impacts to the tribe's governmental legitimacy, political credibility, and corporate/ economic viability are indicated, but no immediate impacts are anticipated by tribal officials	Reversible impacts to tribe's governmental legitimacy, political credibility, and corporate/economic viability are indicated by tribal officials	Irreversible impacts to tribe's governmental legitimacy, political credibility, and corporate/economic viability are indicated (e.g., loss of a court case involving land or resource use rights dispute)
eligion and ceremonialism	Disruption of ceremony and access to sacred sites but no adverse religious effects indicated by tribal officials or elders	Ceremonial disruption and interrupted access to sacred sites, involving immediately reversible adverse religious effects (e.g., having to restart a chant or part of a chant during a ceremony or prayer meeting) reported by tribal officials or elders	Temporary disruption of ceremony and access to sacred sites, involving reversible adverse effects requiring remobilization of kin group and resources (e.g., having to restart a ceremony at another time) reported by tribal officials or elders	Permanent ceremonial disruption and loss of access to sacred sites, involving irreversible adverse religious effects (e.g. departure of holy people from sacred site or non-continuance of healing ceremony) reported by tribal officials or elders
conomy and subsistence	No interference with availability of or access to resources (e.g., willows, pinon nuts, game, land for livestock) indicated by tribal officials or elders	Potential of diminished access to one or more resources for less than the entire or tenure harvesting season or term (e.g. seasonal hunt or livestock transhumance season) indicated by tribal officials or elders	Potential of diminished access to one or more resources for an entire harvesting or tenure season (i.e., disrupting the seasonal or yearly cycle significantly) indicated by tribal officials or elders	Potential of diminished access to one or more resources for more than an entire harvesting or tenure season (i.e., impairing the ability to take part in seasonal or yearly cycles altogether) indicated by tribal officials or elders
amily quality of life	No evidence of adverse effect on families	Family spokespersons or tribal officials anticipate risk to families or groups within families but indicate no immediate impact	Family spokespersons or tribal officials anticipate risk and adverse impacts to families, but impact is short term and reversible	Family spokespersons or tribal officials anticipate permanent risk and adverse impacts to families

"The level of adverse impacts to American Indians is affected by the amount of interaction between the Air Force and Indian tribes in developing and operating the airspace. ailure to consult with affected tribes and their leaders not only hinders identification of sensitive resources and mitigation of impacts but may alienate Indians and thereby increase the level f impacts, particularly in respect to tribal sovereignty.

Table 4. Definition of Impacts for Native Americans

2. Use Table 5 to determine the degree of impact from bomber and helicopter operations. The damage to structures from low altitude flights is manifested in the form of small hairline cracks to gypsum board construction material and glass. It is predicted that these cracks are seldom visible and the probability of occurance is less than that due to structure ageing.

3. Contact state historic preservation office to determine the location of particularly fragile structures. Although potential for these structures is also minimal, it is recommended that they be avoided because of their historical significance and difficulty of repair.

Wilderness/Parks

1. The location and extent of these areas underneath the proposed airspace can be easily determined using aeronautical charts, BLM maps, NFS maps, or NPS maps. State "Wilderness Status Maps" developed by BLM are especially useful.

2. As part of the scoping and IICEP process, solicit information on the airspace proposal from the appropriate managing agency. If necessary, arrange a site visit to the regional or district offices to meet with recreational, aviation, and wildlife specialists.

3. Describe the noise environment (with and without the proposed flying activity) for the affected wilderness/park area.

4. Determine the magnitude of potential impacts based on the altitude, speed, and type of aircraft, frequency of flight activity, noise levels, the extent of the resource affected, estimates of visitor usage, and comments received from caretaker staff.

Wildlife

1. Conduct a literature review and identify the predominant vegetation or habitat types in the vicinity of the airspace.

2. As part of the scoping and IICEP process, solicit information on wildlife resources underneath the proposed airspace by

Type of structure and # of flights		Negligible	Low	Medium	High
Rural building					
Damage probability to single structure		0.01-.04	.05-0.09	0.1-0.4	.5-1
# flights required	bombers	475	2,400	4,750	24,000
	heavy helicopters	1	4	8	38
Historic sites					
Damage probability to single structure		.01-.04	.05-.09	0.1-0.4	0.5-1
# flights required	bombers	475	2,400	4,750	24,000
	heavy helicopters	1	4	8	38
Pre-historic sites					
Damage probability to single structure		.005-.009	0.01-.04	.05-.09	.1-0.5
# flights required	bombers	330	670	3,300	6,700
	heavy helicopters	L.T.1	1	4	8
Seismically sensitive areas					
Damage probability to single structure (avalanche)		.0005	.001	.005	.01
# flights required	bombers	260	530	2,600	5,300
	heavy helicopters	L.T.1	L.T.1	L.T.1	1

[a]Values per year of flying for structures not including windows greater than 50 ft^2. Damage is taken to be the smallest detectable cracks in gypsum or windows. These are hairline cracks indistinguishable from normal aging effects.

Table 5. Probability of structural damage

appropriate regional and state wildlife officials. The following resources should be identified:

- Nest sites for rare, threatened, or endangered birds (bald eagles, peregrine falcons, or other species)
- Designated critical habitat of threatened and endangered species
- Areas that support unusually large numbers of common or rare species or unusually high densities of such species
- Large wetland areas and lakes that provide habitat for birds and other animals
- Breeding or strutting grounds
- Nesting, roosting, and migration corridors for birds (particularly waterfowl) and mammals

3. As a separate action, consult per Section 7 of the Endangered Species Act (1973) by sending a letter to the appropriate USFWS regional office requesting a listing of and other information on threatened and endangered species that might occur under the proposed airspace. If a listed threatened or endangered species or a species proposed for listing may be affected adversely by the proposal, a "biological assessment" may be required by the USFWS. The USFWS will review the biological assessment and issue a "biological opinion" as to whether the proposed action will jeopardize the existence of the listed species. Guidance for preparing a biological assessment is given in 50 CFR 402.

4. Use the criteria proposed in Table 6 to establish the appropriate level of impact. Consider the importance of the resource, the extent of predicted impact, and comments from state and regional wildlife agencies.

Livestock and Poultry

1. Obtain and review agricultural statistics for each affected state to determine the types, numbers, geographic distribution, and economic importance of poultry and livestock. Information

Impact type	Negligible	Low	Moderate	High
Endangered, threatened, proposed, or candidate species	No subject species is present and no impact is expected (e.g., animals not present and no other effects are observable by state wildlife officials). [Note: expectation of habituation not acceptable as a criterion for endangered species.]	Non-breeding animals are present in low numbers. Occasional fright responses are expected to be observed, but with no resulting interference with feeding, reproduction, or other activities necessary to the species survival. No serious concern expressed by state or federal fish and wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service)	Breeding individuals are present. Occasional mortality or interference with activities necessary to survival expected to be observed rarely, but not in such a way as to threaten the continued existence of the species in the area. State or federal fish and wildlife officials express some concern	Breeding individuals are present in relatively high numbers. Mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) are expected that could threaten the continued survival of the species, causing major concern among state or federal fish and wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service)
Other wildlife [Note: particular species (e.g., caribou) or groups of species (e.g., waterfowl may be designated in specific route analyses]	No particularly important wildlife resources are present and no impact is expected (e.g., no susceptible animals present, animals not expected to show fright responses, animals become habituated, high minimum altitude) or impact is so infrequent that it does not cause concern among state or federal wildlife officials (state wildlife agency, U.S. Fish and Wildlife Service)	No particularly important wildlife resources are present. Occasional fright responses expected to occur, but not so as to seriously affect population numbers of a species or cause serious concern among state or federal wildlife officials	Particularly important wildlife resources are present. Occasional mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) are expected to occur (such that route adjustments could mitigate the effect), but not so as to cause major changes in animal numbers or habitat use; specific concerns are expressed by state or federal wildlife officials	Particularly important wildlife resources are present. Frequent and persistent cases, involving one or more species, of mortality or other effects (e.g., injury, physiological stress, effects on reproduction, nesting, or rearing of young) in a manner that may lead to decreases in population levels; specific, serious concerns expressed by state or federal wildlife officials (State Wildlife Agency, U.S. Fish and Wildlife Service)

Table 6. Definition of Impact for Wildlife

can be obtained from state or local agricultural offices, county agents, universities, the CONSERVATION DIRECTORY, OR THE CENSUS OF AGRICULTURE.

2. Identify the geographic areas or counties that are particularly important for livestock and poultry production under the airspaces.

3. In some cases it may be necessary to estimate the number of farms under the airspace, the average size of the farms, and whether the farms are commercial or subsistence operations.

4. Turkey and cattle in penned areas represent the most impacted resource to noise/presence of low altitude aircraft based on an extensive literature review. As such, overflight of large scale operations where these conditions are present should be considered a serious impact.

5. Consider the importance of the resource, the extent of predicted impacts, and comments from state or local agricultural agencies when making a determination on the severity of impacts.

Air Quality

1. Describe the existing air quality environment for each of the counties underneath the proposed airspace by contacting state or local air pollution control agencies or from information obtained from other sources, i.e. university libraries.

2. Determine segments of the proposed airspace that intersect Class I areas using the list contained in Vol I of the GEIS, aeronautical charts, or land status maps. Make sure you determine the worst case airspace segment by including existing airspace that connects to, coincides with, or runs parallel to the proposed airspace. MOA and RA operations usually involve such dispersed flying patterns that air quality impacts are considered negligible.

3. Use the information collected as part of airspace analysis on the flying operations conducted in the proposed airspace such

as aircraft type, sortie rates (annual, possibly 3 hr and 24 hr), altitude (feet AGL), and average airspeed (mph).

4. Consult with AFESC/RDVS and execute the MAILs dispersion model to calculate the maximum pollutant concentrations for the worst case airspace segment (high sortie rates and low flight altitudes). Compare the predicted pollutant concentrations with the Prevention of Significant Deterioration (PSD) allowable concentrations for Class I areas shown in Table 7.

5. Categorize the air quality impacts based on the range of criteria proposed in Table 8. If the impacts for the worst case segment are negligible, then there is no need to evaluate other segments of airspace over Class I areas since they too can be considered to have a negligible impact. If it is unclear as to what segment would cause the highest impacts, it may be necessary to run more than one airspace segment. If pollutant concentrations predicted for the worst case segment are not negligible, it is necessary to examine other parts of the airspace that coincide with Class I areas to identify impacts to those areas.

6. Visibility impacts (aircraft plume effects) of low altitude aircraft are not of significant duration to warrant analysis.

Health and Safety

1. If applicable, describe the ground based radar systems associated with the airspace proposal. Describe the siting, operating conditions, and appropriate analysis required by ANSI, AFOSH 161-5, and DOD 6055.11.

2. If applicable, describe the targeting and navagational operations that may involve laser enhanced weapon systems such as LANTIRN. Describe the features and operating restrictions associated with the safe usage of such systems. The potential hazards of these systems should have been assessed in previous EIAP documentation. Incorporate by reference.

3. Determine if flare releases or chaff dispersal are part of the proposed action. Describe the purpose, characteristics, and

Pollutant	Averaging time	NAAQS	PSD Increments Class II	PSD Increments Class I
Nitrogen dioxide	Annual	100	25	2.5
Sulfur dioxide	3-hr	1,300[b]	512[b]	25[b]
	24-hr	365[b]	91[b]	5[b]
	Annual	80	20	2
Particulate matter	24-hr	150[b,c]	37[b,d]	10[b,d]
	Annual	50[c]	19[d]	5[d]
Carbon monoxide	1-hr	40,000[b]	–	–
	8-hr	10,000[b]	–	–
Ozone	1-hr	235[e]	–	–
Lead	Cal. qtr.	1.5	–	–

[a]All concentrations are in units of micrograms/cubic meter.
[b]Not to be exceeded more than once per year.
[c]Particulate matter under 10 microns in diameter.
[d]Total suspended particulate matter (TSP).
[e]Not to be exceeded on more than one day per year.

Table 7. NAAQS and PSD Increments

Impact type	Negligible	Low	Moderate	High
Incremental concentrations of air pollution	Predicted incremental concentrations of the pollutant of concern are from zero to five percent of the applicable NAAQS or allowable PSD increment. Contribution of the new source is minor and no cumulative impact assessment is necessary.	Predicted incremental concentrations of the pollutant of concern are from five to fifty percent of the applicable NAAQS or allowable PSD increment. A cumulative impact assessment is needed to determine if the incremental plus background (existing) concentrations would exceed the NAAQS or PSD increments.	Predicted incremental concentrations of the pollutant of concern are from fifty to one hundred percent of the applicable NAAQS or allowable PSD increment. A cumulative impact assessment is needed to determine if the incremental plus background concentrations would exceed the NAAQS or PSD increments.	Predicted incremental concentrations of the pollutant of concern are over the applicable NAAQS or allowable PSD increment. A cumulative impact assessment is needed to determine the extent to which total concentrations exceed NAAQS or PSD increments.

Table 8. Definition of Impact for Air Quality

operations associated with these training missions. Assessment of flare operations should include the potential for igniting fires on the ground and safety hazards of unignited flares. Assessment of chaff operations should include an estimate of dispersal area and potential health hazards to biological resources. Consult HQ SAC report "Identifying and Evaluating the Effects of Dispensing Chaff from Military Aircraft" for analysis methods and findings.

[redacted] the Bird Aircraft Strike Hazard (BASH) Team, HQ [redacted] EEV, at Bolling AFB, Washington DC, to determine if [redacted] significant bird strike potential exists for the proposed [redacted] space. Provide airspace geographic coordinates and aircraft [redacted] to the BASH Team.

5. Aircraft accident rates and risk to people or property resulting from low altitude flying operations is low so no specific analysis is necessary. Refer to GEIS Vol IV, Appendix J for more information.

6. Although the probability of accidental release of ordnance (bombs or missiles) from aircraft is low, describe the type and frequency of missions involving ordnance transport and delivery.

Determination of Significance

The decision about importance is framed in terms of "significance." This determination is, in many ways, judgemental. The opinions on what may be significant vary among individuals, agencies, resource, area, and environmental assessment.

According to CEQ Section 1508.27, "Significantly" as used in NEPA requires considerations of both context and intensity:

> (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the

setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

(2) The degree to which the proposed action affects public health or safety.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

(6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impact. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

(8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Within the analysis section you will find proposed guidelines that you can use to help determine significance. Table 9 summarizes the guidelines for the serious impacts of each resource and should be used to help in making a determination of significance. The analyst should be cautioned that many factors (other than those proposed here) enter into this determination and often professional judgement is necessary based upon current knowledge, site-specific information, and consultation. Many of the potential impacts will not reach these levels if adequate planning is conducted beforehand.

Identify Cumulative Impacts

Once the analysis of each particular resource has been examined, cumulative impacts, i.e., the collection of impacts must be examined. This includes your particular action and its impact(s) plus any other action that may be occurring in the vicinity. The odds are that impacts from other actions do not or will not affect your action. If the baseline data gathering process has been thorough, the only impacts will be the delta (increase).

Examples of potential cumulative impacts are: an aircraft hubbing operation, use of the airspace for special exercises, expansion of general aviation activities in your airspace (i.e,

CATEGORY	IMPACT DRIVER	IMPACT	LEVEL OF IMPACT
Airspace	Competition	Scheduling Utilization Conflict	FAA determines based on their criteria (FARS, System Mgmt, Air Safety)
Social	Noise Intrusion Fear of Accidents	Annoyance Interruption Community disturbance Reduced livestock productivity Disturbance of young/aged	Although a correlation between aircraft noise and annoyance is not substantiated for low altitude flying operations. Social disturbance levels can be expected to be significant when aircraft operations result in noise levels to a receptor greater than 75 Ldn or Ldnmr.
Noise	Noise	Increasing risk estimate for hypertension	If Ldn or Ldnmr to a receptor is greater than 75 dB, you have definite cause for concern. Below 75 Ldn or Ldnmr, public controversy may trigger "high" impacts due to interruption, annoyance and/or disturbance before health impacts become a factor.
Native Americans	Intrusion	Sovereignty Religious Economic Impact/ Subsistence Interference Reduced Quality of life	Strong, adverse response from tribal elders. -Irreversible impacts to politic and economic sovereignty. -Permanent disruption to religious site/ceremonies. -Diminished economic or subsistence opportunities. -Permanent risk or adverse impacts to families.
Structures	Vibration	Windows/walls (cracks) Historic/archeological sites Landslides/avalanche prone terraine	High probability of damage predicted for: -Rural buildings -Historic structures -Archaeological sites -Seismically sensitive areas
Wilderness	Noise Visual intrusion	Wilderness character intrusion Solitude interruption Safety Land management interference	Strong adverse response agency officials Activity forces park officials to deny park users access to WA, WSA, or park. Users cease visiting WA, WSA, or park due to impacts.
Wildlife	Noise Visual intrusion	T&E habitat degradation Wildlife stress	Wildlife officials express major concern the proposal could adversely effect T&E species an or designated critical habitat. Wildlife officals express major concern the proposal may adversely effect particularly important wildlife resource.
Livestock & Poultry	Noise Visual intrusion	Economic loss Reduced productivity	Substantial number of resources beneath proposal. High potential impact to individual farmer.
Air Quality	Emissions	Increase in allowable pollutants	Pollutant exceeds allowable PSD standards
Health & Safety	R.F. emissions	Probability of exposure risk	Nonconformance with ANSI or AFOSH standards may result in unacceptable levels of thermal effects and interference with other RF sources.
	Aircraft	Probability of accident risk	High accident potential High BASH potential
	Flares Chaff	Risk of fire Toxicity	Flare release over non DOD owned land with dense vegetation.

Table 9. Suggested significance criteria

more airports therefore more activity) and new and improved airframes/weapon systems.

RELATIONS AND DURATIONS

RELATIONS AND DURATIONS

The Environmental Planning Function (EPF) is a mission support staff. As discussed previously, timeliness is one of the most important virtues in a support staff. We can safely say then, that as mission support staff, we should be aware of the timing of the various aspects of the EIAP.

In this section, you will learn the sequence of the various procedures and products presented earlier and you will learn which are constrained by preceding actions and which constrain succeeding actions. Throughout the EIAP, you should remember that some procedural durations are mandated, others are a function of the resources committed to them, and yet others combine both mandate and resource constraints...not to mention mailing delays and other inevitable "disasters" which (always) seem to crop up at the wrong time. We also hope you will become more aware of the options you have available to properly coordinate your product with the public, as required.

Interagency/Intergovernmental Coordination for Environmental Planning (IICEP)

The process of IICEP is as basic as the process of communicating. It involves talking to the public, to the regulatory community, to the people and agencies that could have an interest in your proposal and gleaning from them data and information which could affect the decisionmaking process. This whole process of communicating, coordinating,and consulting provides the means to satisfy NEPA and maintains Air Force credibility with the regulators and public alike. IICEP, as defined in AFR 19-9, formalizes part of that series of communications.

Whatever the mode, keeping channels of communications open throughout the EIAP is important, no one likes to be blindsided, especially your decisionmakers at or near the end of a long tedious EIAP exercise. It is equally important to keep a good record of your contacts. Who did you talk to? What did they say? What authority do they have? Who do they represent? What did you say to them? Did you make commitments? This

contact list - names, addresses, and dialogues should be kept in your official EIAP folder for future reference and to assist in your formal IICEP efforts.

The EIAP, as described herein suggests communication at several distinct points along the way. Informal communications should begin with the decision to write an EA (or maybe even before); although we recommend you consider formally submitting your DOPAA to affected agencies as an informational transmittal, asking for information input into your EIAP. During the EA data collection phase (informal or formal), consultations with agencies help identify problem areas, regulatory requirements, and can give you a head start on developing alternatives which might be necessary to keep the proposal viable. Beyond the personal contact stage, completing an EA requires formal IICEP coordination at the FONSI stage. Its critical for you to realize there are two possible forms of coordination here. If your EA meets one of the four criteria identified in AFR 19-2 11(f), your FONSI must be coordinated for 30 day public review. On the other hand, if your proposal does not fall into one of those four categories, the coordination becomes simply a "for your information" transmittal. In either instance, documents with appropriate cover letters should be transmitted to agencies previously identified on your contact list and other appropriate state/federal agencies, as determined from the content of the EA.

Regional AFRCEs have the capability to assist in your formal state/federal IICEP efforts (local distribution, however, is the responsibility of the proponent). When requesting AFRCE assistance, provide one copy of the EA, 15 copies of the FONSI, and a list of any agencies you would specifically like to have receive the FONSI. You should also provide specific instructions as to whether the 30 day public review period is applicable. For DOPAA distribution, 15 copies of the document is sufficient.

For an EIS scenario, the IICEP process becomes more intense and more formal. From the NOI, to submission of the FEIS and

ROD, the IICEP plays a role. The AFRCEs are available to assist in each of these stages.

Duration

The average duration of the formal coordination process for each EIAP procedure is graphically illustrated in Figure 8.

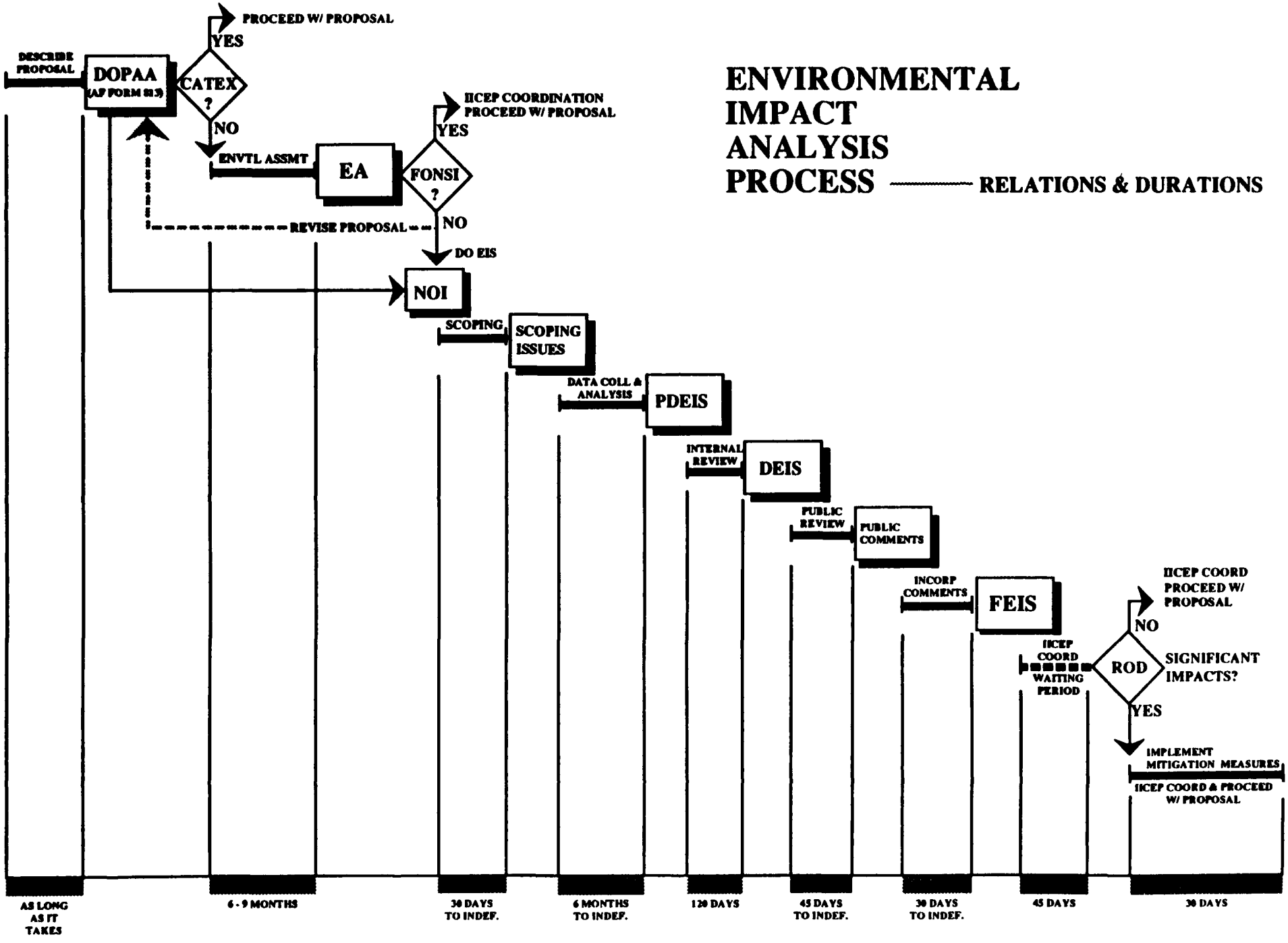


Figure 8. EIAP Timeframe Estimates

DIRECTORY

DIRECTORY:

One of the most significant provisions of NEPA and its implementing regulations was the requirement to open the environmental analysis process to agency and public scrutiny. While the regulations regarding required products have to do with content, the regulations regarding procedures have to do with ensuring the maximum opportunity for public information and comment. The prescribed public comment period and post EIS waiting period are meant to give the public adequate time to comment. The requirement for scoping and public hearings are meant to give the public a forum for commenting.

Maximum agency cooperation and review is also required. Agency review frequently triggers compliance requirements with other environmental laws than NEPA. These include, but are not limited to: the Clean Air Act, the Historic Preservation Act, the Endangered Species Act, the Federal Land Management Policy Act, and the American Indian Religious Freedom Act.

This directory should be considered as a starting place to begin agency coordination and gather appropriate data. As you accomplish a few environmental assessments, you will develop more current and specific contact lists for the agencies that may be most affected by the proposed action. This should be added to this listing. The most useful place for any project manager to start with the agency coordination process is the appropriate Air Force Regional Civil Engineer Environmental Division--AFRCE-ER/CR/WR--ROV.

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Department of Fish and Wildlife Suite 1692, 500 N.E. Multnomah St Portland, OR 97232 (503) 231-6118	California, Hawaii, Idaho, Nevada, Oregon, Washington
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Southeast Region 75 Spring Street, S.W. Atlanta GA 30303	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennesse, Virgin Islands
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GLOSSARY

Glossary

AIRSPACE - A generic term used for all categories of airspace used by flying units and abbreviated as follows: Instrument Route (IR), Visual Route (VR), Slow Route (SR), Warning Areas (W), Restricted Areas (RA), Military Operations Area (MOA)

AIRSPACE MANAGEMENT - The coordination, integration, and regulation of the use of airspace of defined dimensions. The objective is to meet command requirements through the safe and efficient use of available navigable airspace in a peacetime environment.

AMBIENT AIR QUALITY STANDARDS - Standards established on a state or federal level that define the limits for airborne concentrations of designated "criteria" pollutants (e.g., nitrogen dioxide, sulfer dioxide, carbon monoxide, total suspended particulates, ozone, lead, and hydrocarbons) to pro-tect public health with an adequate margin of safety (primary standards) and to protect public welfare, including plant and animal life, visibility, and materials (secondary standards).

AMERICAN INDIAN - known also as Native American, a term referring to any ethnic group in North American prior to the arrival of Europeans in the 15th Century.

ATTAINMENT AREA - An area that has been designated by the US Environmental Protection Agency and the appropriate state air quality agency as having ambient air quality levels below the ceiling levels defined under the National Ambient Air Quality Standards

CATEGORICAL EXCLUSION (CATEX) - A category of actions which do not indivi-dually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a federal agency in implementation of these regulations and for which, there-fore, neither an environmental assessment nor an environmental impact state-ment is required.

DECIBEL - A unit for expressing the relative intensity of sounds on a scale from zero for the average least perceptive sound to about 130 for the average pain level.

ENDANGERED SPECIES - A species that is threatened with extinction throughout all or a significant portion of its range.

ENVIRONMENTAL ASSESSMENT - A concise public document for which a federal agency is responsible that serves to provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

ENVIRONMENTAL IMPACT ANALYSIS PROCESS - The process of conducting environmental studies as outlined in Air Force Regulation 19-2.

ENVIRONMENTAL IMPACT STATEMENT - National Environmental Policy Act (NEPA) related document prepared for use by decision makers in which various impacts of a proposed project are analyzed, possible mitigation measures considered, and comments incorporated from affected agencies and the public.

FEDERAL REGISTER - An official publication that provides a uniform system for making available to the public regulations and legal notices issued by federal agencies. These include Presidential proclamations and executive orders, federal agency documents having general applicability and legal effect, docu-ments required to be published by an Act of Congress and other federal agency documents of public interest.

FINDING OF NO SIGNIFICANT IMPACT - A document by a federal agency briefly pre-senting the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared.

IFR MILITARY TRAINING ROUTES (IR) - Routes used by the Department of Defense and associated Reserve and Air Guard units for the purpose of conducting lowaltitude

navigation and tactical training in both IFR and VFR weather conditions below 10,000 feet MSL at airspeeds of 250 KIAS.

IMPACT - An assessment of the meaning of changes in all attributes being studied for a given resource; an aggregation of all the adverse effects, usually measured using a qualitative and a nominally subjective technique.

INSTRUMENT FLIGHT RULES/IFR - Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate types of flight plan.

KNOT - Unit of speed equal to 1.15 statute miles per hour. A distance of one nautical mile.

Ldn NOISE LEVEL - The 24-hour average-energy sound level expressed in decibels, with a 10-decibel penalty added to sound levels between 10:00 PM and 7:00 AM.

LOW ALTITUDE TACTICAL NAVIGATION (LATN) - A designated airspace area in which aircrews practice point-to-point navigation below 10,000 feet MSL at speeds of less than 250 Knots Indicated Airspeed (KIAS). LATN's are developed by the Air Force and do not require FAA approval. However, the Air Force must submit environmental documentation, similar to that submitted for MTR proposals, which a LATN is developed.

MITIGATION - Actions taken to minimize or offset the effects of an action con-sidered under an environmental impact statement.

MOA - An airspace assignment of defined vertical and lateral dimensions established outside positive control area to separate or segregate certain military activities from IFR traffic and to identify for visual flight rules (VFR) traffic where these activities are conducted.

MTR - A low level, high speed training route established according to criteria in the FAA Handbook 7610.4. Routes may be established in accordance with either visual flight rules

designated visual routes (VR) or instrument flight rules designated instrument routes (IR).

NATIONAL ENVIRONMENTAL POLICY ACT - The federal law, going into effect on January 1, 1970, that (1) established a national policy for the environment, (2) requires federal agencies to become aware of the environmental ramifications of their proposed actions, (3) requires full disclosure to the public of proposed federal actions and a mechanism for public input into the federal decision-making process, and 4) requires federal agencies to prepare an environmental impact statement for every major action and would significantly affect the quality of the human environment.

NONATTAINMENT - An area that has been designated by the US Environmental pro-tection Agency and the appropriate state air quality agency as exceeding one or more National Ambient Air Quality Standards.

PHYSIOGRAPHIC PROVINCE - Geographic area of uniform geology.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) - Prevention of significant deterioration regulations, expressed in Public Law 95-95. These regulations are designed to limit air pollution impacts from facilities to a portion of the ambient air quality standards.

RAPTOR - Bird of prey, e.g., eagle, hawk, owl.

RESTRICTED AREA - Airspace designated under FAR Part 73 within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Restricted areas are designated when determined necessary to confine or segregate activities considered to be hazardous to nonparticipating aircraft.

SCOPING - An early and open process for determining the scope of issues to be addressed in an EIS and for identifying the significant issues related to a proposed action. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource

specialists and managers, and written comments in response to news releases, direct mailings, and articles about the proposed action and scoping meetings.

SOCIOECONOMICS - The study of economic, demographic, social, public service and finance, and quality of life impacts of a proposed project.

SORTIES - One mission or attack by a single plane.

SPECIAL USE AIRSPACE - Airspace of defined dimensions where activities must be confined because of their nature, or where limitations are imposed on aircraft operations that are not a part of those activities, or both.

SR - Slow Speed Low Altitude Training Route - A low level training route which is used for military air operations at or below 1500 feet at airspeeds of 250 knots or less. Criteria are determined by the responsible MAJCOM.

STATUTE MILE - A unit of measure equal to 5280 feet.

STRATEGIC TRAINING RANGE COMPLEX (STRC) - A Strategic Air Command (SAC) training area located in Montana, North Dakota, South Dakota, Nebraska, Wyoming, and Idaho. The STRC encompasses at least 25 IRs associated with 6 electronic scoring sites [Belle Fourche, Dickinson, Conrad, Forsyth, Powell, and Havre] and numerous portable mini-mute radar sites.

THREATENED AND ENDANGERED SPECIES (T&E) - Plants and animals included on the National Register are defined in the Endangered Species Act of 1973] Section 3 (4)] as "any species which is in danger of extinction through all or a significant portion of its range; the term threatened is defined [Section 3 (15] "as any species which is likely to become an endangered species within the foreseeable future . . .".

THREATENED SPECIES - A taxonomic group likely to become endangered in for the foreseeable future.

TRIBAL SOVEREIGNTY - The limited right of Indian governments (conferred by treaty, executive order, or congressional legislation) to exercise authority over indigenous people who have established their cultural, linguistic, and historic identify.

VFR MILITARY TRAINING ROUTES (VR) - Routes used the the Department of Defense and associated Reserve and Air Guard units for the purpose of conducting low-altitude navigation and tactical training under VFR rules below 10,000 feet MSL at airspeeds in excess of 250 KTS IAS.

VISUAL FLIGHT RULES (VFR) - Rules that govern the procedures for conducting flight under visual conditions. The term "VFR" is also used in the United States to indicate weather conditions that are equal to or greater than mini-mum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

WILDERNESS AREA - A large tract of public land maintained essentially in its natural state and protected against introduction of intrusive artifacts.

WILDERNESS STUDY AREA (WSA) - Areas possessing wilderness characteristics were established under the Federal Land Policy and Management Act of 1976. The areas are to be maintained in their original condition and are to be con-sidered for inclusion in the National Wilderness Preservation System.

APPENDICES

APPENDIX A

EVOLUTION OF AN AIRSPACE PROPOSAL

EVOLUTION OF AN AIRSPACE PROPOSAL

The requirement to develop an airspace proposal is generated by the unit as a result of one of the following: FAA rulings, orders, or authorizations which require military flight to be conducted in a prescribed manner and within certain defined airspace (such as FAA Hq establishing the MOA program as a whole); or by the unit itself when additional airspace is needed to accomplish the mission. The most common Air Staff and MAJCOM actions generating an airspace requirement are the basing decisions for new weapons systems and aircraft conversions or modifications such as the B-2 or C-17. Since the military does not operate in the National Airspace System (NAS) in a vacuum, other factors influence military activity. Examples of such external influences are an air carrier hubbing decision, or a congressional mandate on airspace use. By common practice, it is the unit which in reality determines the airspace requirement and initiates a formal proposal for airspace to accommodate the higher headquarters decision. The MAJCOMs may provide additional guidance concerning minimum volume of airspace required for a particular mission. *Exceptions* include the exercise plans shops (1 CEVG, USCENTAF, etc.) which accomplish all actions in preparation of large-scale CONUS exercises. Another example would be *some* airspace proposals for use MAJCOM-wide such as SAC's Strategic Training Route Complex (STRC). The procedures for developing, negotiating, processing, approving for publication and charting is best explained by chronological "phases". The typical course of events follows (refer to validation techniques beginning on page 9 for further detail on phases I and II which follow):

PHASE I, THE UNIT:

1. The unit identifies or is informed of an operational requirement.

2. The unit determines the type of temporary or permanent airspace most suitable, based on the *specific* mission requirements.

   a. Restricted Area for *hazardous activity*, rule-making Special Use Airspace (SUA).

   b. Military Operations Area (MOA), non rule-making SUA for nonhazardous activity.

   c. Warning Area, non rule-making SUA which may contain either hazardous or nonhazardous activity.

   d. Controlled Firing Area (CFA), non rule-making SUA for hazardous activity.

   e. Alert Area to inform other airspace users of an activity, non rule-making SUA.

   f. IR or VR, under the Military Training Route (MTR) program for high-speed, low-altitude activity.

   g. Air Traffic Control Assigned Airspace (ATCAA) in the Positive Control Area (PCA).

   h. Air Refueling Track or Anchor.

   i. Low Altitude Tactical Navigation (LATN) area for slow-speed, *random* VFR navigation.

   j. Slow Speed Route (SR) for low altitude navigation training (*not* part of the MTR program).

   k. Altitude Reservation (ALTRV).

3. The unit determines if the new requirement can be incorporated into existing airspace charted for military flight operations. ***This must be done if such airspace is both suitable and available.***

   a. Suitable existing airspace, already charted, *negates* the requirement for a new airspace proposal. Review the environmental for accuracy and amend the Environmental Impact Analysis Process (EIAP) documentation as needed.

b. See if a suitable airspace proposal, as yet uncharted, is already in coordination. Again, the EIAP documentation must be reviewed and amended as needed for additional activity. The numbered Air Force (NAF), MAJCOM, and Air Force Representative (AFRep) can help find sister units' proposals still in coordination which could accommodate your requirement.

4. If existing or already proposed airspace is not suitable, the unit must begin developing a formal airspace proposal using FAA publications and/or MAJCOM guidance pertinent to the type of airspace. *The airspace proposal may involve modification of existing airspace, which is preferred over creating entirely new airspace.*

a. FAAH 7400.2 is the source publication for processing all SUA.

b. FAAH 7610.4 is the source publication for processing all MTRs, Air Refueling (A/R), ATCAA, and ALTRV airspace. (ATCAAs do not have a definitive process, however, they are negotiated with and approved by the air route traffic control center (ARTCC) controlling the airspace. A letter of agreement defines the airspace and procedures.)

c. LATNs and SRs have *no* step-by-step processing instructions in any FAAH, and *no* letter of agreement with the FAA is needed. In fact, the FAA has no formal involvement in the processing whatsoever. Use MAJCOM guidance for developing and processing these proposals.

PHASE II, THE PROPONENT:

1. The proponent studies published organization of the airspace and terrain suitability (when applicable) within an operational radius (air miles) of the base to determine feasible locations of airspace which will accommodate mission requirements. The proponent consults VFR Sectional Aeronautical Charts, FLIP documents, and ARTCC sectorization maps, as appropriate. The proponent consults with the Chief, Air Traffic Control Operations (CATCO) and a TERPs expert for early identification of IFR conflicts in the ATC system, and identifies, to the greatest extent practical, "primary area" assigned to IFR operations (a TERPs expert and the ARTCC can help).

2. The proponent develops a preliminary, informal proposal with alternatives and discusses same with key FAA ATC facilities. *Some* proposals described above do not require this step. From an airspace point of view, discussing IFR interface between your proposal and the existing IFR system will determine the most feasible approach to satisfying your operational requirement. This consultation with the FAA ATC personnel, when appropriate, will form the basis for developing a formal airspace proposal.

3. The proponent alerts the base civil engineers to the requirement and provides all available information which will be helpful to the EIAP. You must think, "worst case scenario." If there is a wildlife refuge "merely" nearby, address it! You may find your proposal *in* the refuge later on, driven there by ATC problems uncovered by the FAA. The environmental consequences could be unacceptable, so early scrutiny in the preliminary EIAP action will help prevent later trouble. In addition to airspace location, civil engineers will want *extensive* information including type aircraft, numbers of aircraft, power settings, airspeeds, altitude, time of day to be flown, days per week, etc., all cross-referenced.

> **NOTE:** By now, the AFRep, NAF, and MAJCOM should be well aware of the unit's intentions. This will permit early identification of conflicts with other units or services which need resolution ASAP. Also, they may be able to incorporate another unit's airspace requirement into your proposal, thus lending weight to its importance when negotiating with the FAA.

PHASE III, THE PROPONENT:

1. The proponent refines and develops the proposal in accordance with the appropriate FAA publications and/or higher headquarters guidance.

2. The proponent coordinates refined details of the proposal with other affected military organizations and consults with selected civilian aviation interests. *Do not neglect RAPCONs.*

3. The proponent coordinates details of the formal airspace proposal with affected air traffic control facilities. The NAF/MAJCOM may assist in this effort in accordance with command policy. Should the need for sensitive negotiation arise, the AFRep is formally asked to arbitrate and assist (the MAJCOM makes the request). We do not unnecessarily escalate disagreement with the FAA, we accommodate our operational need in the IFR system as feasibly as we can *without compromising the mission*. An FAA policy may be rebutted by escalating it to a higher FAA echelon for resolution. An example would be excessive advance notice for calling up MOA airspace which precludes the unit from shorter term scheduling flexibility--and hence, combat readiness. The policy escalation matter involves *judgment* and *credibility*, and the latter can be diminished along with professional working relationships if these matters are not handled discretely. In this step it is important to scrutinize the intent of constraining policies and distinguish between convenience and necessity.

4. The proponent conducts a *flight evaluation* of the proposed airspace and air traffic control procedures. Forethought and planning are important here.

a. The flight-eval may be a search for uncharted obstructions.

b. It may be a search for environmentally sensitive areas not otherwise identified. Obviously you do not flight-eval a charted wildlife refuge or bird sanctuary to test for birdstrike potential!

c. It may be a test of radar and communications coverage for the ARTCC. A poor showing here can severely damage the prospects for your proposal if some level of ATC service is required. For example, a MOA flight-eval may be a survey of communications coverage. A survey aircraft transmits poorly with a damp radio or intermittent IFF. The ARTCC may presume the problem lies in the radio relay sites' locations of radar coverage. The ARTCC sees the issue as a *precedent* for slicing shelves out of your MOA to separate the MOA airspace from *all* primary areas beneath. Remember, radar and comm coverage requirements are ultimately negotiable policy issues.

d. It may be a communications survey for recall by your command post.

e. It may be all of the above. Pick an experienced aircrew with the airspace manager on board if possible, *thoroughly* brief everyone involved, and send a formation instead of a single aircraft. A formation may preclude a single aircraft malfunction (such as squawk or radio) from damaging your proposal since the second in formation will act as a backup. You may regret being "penny-wise" by sending only one aircraft on this mission.

5. The proponent provides civil engineers final details of the airspace proposal germane to the EIAP. Let the environmental planners know ASAP when airspace details are worked out. This will allow them to concentrate their efforts early on the final EIAP instead of wasting time on your first, less accurate, approximations. If the EIAP does not keep pace, it *will* slow down your proposal.

6. The proponent forwards the airspace proposal to the NAF or MAJCOM with EIAP documentation.

PHASE IV, THE NAF AIRSPACE MANAGEMENT SHOP:

1. The NAF reviews the formal airspace proposal to provide final validation of the requirement and ensures all necessary

coordination has been accomplished, and ensures FAA criteria are satisfied.

2. The NAF forwards the formal proposal to the MAJCOM.

PHASE V, THE MAJCOM AIRSPACE MANAGEMENT SHOP:

1. The MAJCOM reviews the airspace proposal and provides final validation of the requirement.

2. The MAJCOM coordinates the airspace proposal with their environmental shop, if required, and *normally* holds the airspace proposal in abeyance pending MAJCOM review of the associated EIAP. This is because the EIAP must always *assist in the decision-making process.*

3. The MAJCOM forwards the complete package (*including environmental documentation*) to the AFRep at the appropriate FAA region.

PHASE VI, THE AFREP:

1. The AFRep coordinates the finalized airspace proposal with other military representatives at the FAA region.

2. The AFRep submits the airspace proposal *and* environmental documentation to the FAA region for final FAA processing to begin.

> **NOTE:** For purposes of compliance with the National Environmental Policy Act (NEPA), the DOD acts as "lead agency" for all proposals *initiated* by the DOD, with the FAA being "cooperating agency". For airspace proposals initiated by the FAA, either affecting military use airspace or as a result of a DOD airspace proposal, the FAA is the "lead agency" and the DOD is "cooperating agency".

PHASE VII, THE FAA REGION:

1. The region reviews the airspace proposal for accuracy and interface with the NAS. If deemed necessary, the FAA region may disapprove a proposal even if the ARTCC has concurred. The FAA region may negotiate with the proponent for compromise solutions. Informal FAA-chaired public meetings may uncover airspace problems at the FAA regional level; this occasionally happens with SUA proposals even after the ARTCC has approved. The AFRep becomes the focal point for negotiation and meetings between the FAA region and interested military parties. Provisions are available to elevate disagreed proposals to HQ USAF and FAA Hq for resolution although this does not happen frequently. A Restricted Area proposal may be elevated to HQ USAF/XOORF for problem resolution with FAA Hq--it must be circularized by FAA Hq in the Federal Register. Likewise, the environmental documentation for a Restricted Area may be elevated to HQ USAF/LEEV.

2. If a proposal would increase the burden on the public or appears to be controversial, the FAA region may circularize the proposal to the public for comment. Additionally, those proposals designated as "rule-making" will later be circularized by FAA Hq. Such is always the case for Restricted Areas and Prohibited Areas (rule-making SUA) which are always publicized in the Federal Register. *Non rule-making* SUA proposals are circularized at the FAA regional level only. Circularizing SUA is discussed in FAAH 7400.2. Although there is no provision for circularizing MTRs per FAAH 7610.4, some FAA regions informally forward information copies of MTR proposals to state DOTs and certain fixed-base operators for comment. This is likely to take 14 to 30 days for response, and it will delay your proposal accordingly. Both FAA Hq and FAA regions keep mailing lists of interested parties to facilitate their circularization efforts.

3. If necessary, the FAA region may call an informal airspace meeting or formal airspace hearing to address public comment. Meetings and hearings are covered in FAAH 7400.2 and

apply in particular to SUA. MOAs and Restricted Areas are the most frequent proposals subjected to an informal meeting or formal hearing. There is no provision to call meetings or hearings on MTRs; MTRs are deemed to have a negligible impact on the public's access to the navigable airspace. FAA-chaired meetings and hearings are for addressing aeronautical matters. Any environmental questions which arise during a meeting or hearing will be referred to the NEPA "lead agency" for response. This forum is provided in order to allow the public to express opinions or objections (or support) for FAA *consideration* when the FAA echelon makes a decision *at some later date*; decisions are *not* made at a meeting or hearing. Environmental meetings are only called by the FAA for actions *initiated* by the FAA. When the DOD is the "lead agency" for NEPA, all the environmental fact-finding should have been completed before the formal proposal was submitted to the FAA.

4. The FAA region forwards approved airspace proposals to FAA Hq for publication in the National Flight Data Digest (NFDD) and subsequent charting. The NFDD is published five days weekly and forwarded to the Commerce Department for publication on sectional charts. The NFDD is also forwarded to the Defense Mapping Agency Aeronautical Center (DMAAC) in St. Louis for publication in FLIP products and on TPC, ONC, etc., charts. DMAAC selects certain aeronautical information to publish; not all NFDD information is to be found on DMAAC products. Warning Areas are coordinated with the DOD and State Department prior to charting.

PROCESSING TIME: Following is an approximate average time currently required to process airspace proposals, from initiation by the proponent to charting:

	Restricted Areas (Days)	Warning Areas* (Days)	MOAs (Days)	MTRs (Days)
Phase I-III (Note 1)	180	120	150	150
Phase IV (Note 1)	20	20	20	20
Phase V (Note 1)	45	45	45	45
Phase VI	10	10	10	10
Phase VII (Note 2)	245	190	135	60
Total Less Charting	500	385	360	285
Charting (Note 3)	119/64	119/64	119/64	119/64
Total	619/564	504/449	479/424	404/349

* Warning Areas are approved by the State Department IAW E.O. 10854.

NOTE 1: The time period required to accomplish Phases I through V, though average, is quite variable since it is predicated on the following factors:

a. The amount of manpower allocated to the required tasks at the various USAF echelons and duty priorities assigned to the development/processing task.

b. The complexity and geographic location of the proposal. Also the nature of the ATC environment, i.e., congestion, workload, radar coverage, communications coverage, controlled or uncontrolled airspace, etc.

c. The amount of airspace management expertise applied by the proponent. This applies to Phase I through III. False starts or trial and error will slow down the process. Help from TERPs, CATCO, and environmental experts helps, though this expertise can be a scarce commodity–it's a matter of priorities again.

d. The ability of the proponent to anticipate and discover agreeable solutions to aeronautical/ATC objections and environmental problems. Compromise without impacting the ability to do the mission effectively is an important art. Controversy, which is often unpredictable, drives lengthy delays in the airspace management business.

e. The ability of the proponent to provide sufficient and accurate data, and to assist in conducting the EIAP process.

NOTE 2: The figures for Restricted Areas, Warning Areas, and MOAs are based on the *minimum* times for FAA processing. These minimum times are located in FAAH 7400.2. Public meetings or hearings called by the FAA, and Congressional inquiries may extend these times by 60 days or more.

NOTE 3: The proposal is not effective, i.e., the airspace cannot be used, until it is charted. *Exception:* subparagraph f of the Speed Exemption Letter provides for early use of coordinated airspace, MAJCOM validated requirement, in *selected cases* when charting delays are an unacceptable constraint. Such might be the case for a new MOA which missed a charting cycle and was *critical* to a unit's combat readiness. Our early access to such airspace requires us to notify the public through alternate means, other than the chart. This involves media campaigns and mailout efforts. It must be emphasized that beating a chart cutoff by a day or two guarantees nothing! A heavy workload at FAA Hq, DMAAC, or the Post Office can slip your proposal into a later cycle even though the proposal arrived "just in time". A couple of weeks extra lead time gives your proposal a better chance. The charting cycle is 56 days long; add 8 days for mail and handling and you have 64 days.

APPLICATION OF THE VALIDATION PROCESS

You are confronted by an operational requirement for airspace. The requirement must be validated to have merit. "*Defining your needs*" is validation in a nutshell. You must define the *type* of airspace designation required, its *size and shape*, how *far away* you can afford to operate (*location*), and required *scheduling prerogatives*. Use the process of elimination to find one of the few options, then enter into the development of proposed action and alternatives, and finally negotiating channels with *documentation* of what your needs really are. It is usually not too difficult to agree on what type of airspace designation you need; however, its size, shape, and location are the difficult matters! Size, shape, and location are driven by the mission profile, so you must be an expert in knowledge of the mission and the effects of changing these variables.

To solve the validation process, a "wiring diagram" might seem appropriate to guide you to correct airspace options; however, such a model, were it comprehensive, would probably be unreadable due to its complexity. The "Socratic Method" of questioning the main required elements should help build a convincing case. Consider FARs, military flying regulations, policy constraints, and the intent of each type of airspace designation. Occasionally the only solution may be to seek waivers, and these will require an "equivalent level of safety" be demonstrated through alternative means such as aircraft equipment, aircrew experience, special training, etc. In short, there is no blank check to do something dangerous, waivered outside flying regulations, merely because we assert an operational need. In peacetime, safety will be a prerequisite and the operational need (including waivers) will react accordingly.

Here are some of the relevant questions to ask to build a validation for your airspace proposal. This can be only a partial list geared toward the main elements in any airspace proposal. Airspace requirements tend to be parochial due to the many types of missions to be addressed; therefore, you must scrutinize your needs to ensure unanswered, important questions do not detract from your *validation's credibility*. The validation will be relevant to FAA negotiations, other airspace interests, and the environmental process.

Total Segregation

Do you need to do "hazardous activity"? Use caution defining "hazards". This term generally applies to firing ordnance, its "safety fan" or "frag pattern", and a portion of the subject aircraft's profile. You will need a Restricted Area or Warning Area for this. A Controlled Firing Area may be appropriate for some stringently controlled hazards originating on the surface (i.e., not fired from an aircraft). A Warning Area provides free access to non-participants and must be confirmed clear of other air and surface activity before the hazardous activity takes place. The bottom line is that the hazard must not endanger non-participants.

Do you need guaranteed non-interference with your mission? A Restricted Area, or an ATCAA or ALTRV *in the PCA*, can protect your non-hazardous mission from all non-participants. This can assist classified missions and test profiles which need airspace priority. For example, some test profiles involve large expenditures of scarce assets and/or may be flown only a few times. ATC vectoring or even see-and-avoid maneuvering could cause loss of part of a profile and render the sortie useless. Or perhaps all non-participants must be kept at a distance for security. Remember, establishing traffic priority is a *luxury* and can be a severe impact on ATC. Traffic priority in one form or another is what you are requesting when you need non-interference from other aviation interests.

Airspeed / Mach

Do you need airspeed greater than 250 KIAS below 10,000 feet MSL in sovereign U.S. airspace? If so, you must seek appropriate coverage under FAAH 7610.4, the Speed Exemption Letter. See also AFR 60-16. If your mission is not covered you may have to seek a

waiver to the speed rules of FAR 91.70 (on 18 Aug 90, FAR 91.70 becomes 91.117) and AFR 60-16. The Speed Exemption Letter covers Restricted Areas, MOAs, MTRs, *some* exercise operations (large-scale), *some* approved airspace proposals still awaiting charting (MAJCOM validation required), *some* flight manual operations, and *some* special missions. On a rare occasion, a sortie may not fall within the purview of the Speed Exemption Letter and you may have to request a waiver to the FAR. Examples would include an airshow and perhaps the testing of some weapons systems. Seek HHQ guidance in unusual cases.

Do you need to fly supersonic? FARs address civil sonic booms, but *not* military supersonic flight; however, the FAA may take interest when our supersonic operations are mixed with other aircraft flying by "see-and-avoid". There may also be concern about impacting air traffic controller reaction time and workload, proximity of ATC boundaries, and the tendency toward large profiles and turn radiuses caused by high true airspeeds. AFR 55-34 specifies criteria for supersonic operations from the environmental and "good neighbor" aspects. Additional criteria are established for specific weapons systems. The environmental processing will be more time consuming than airspace processing for subsonic operations.

IFR Services and Controlled vs Uncontrolled Airspace

Do you need access to air traffic services (i.e., ATC clearance providing positive IFR separation)? Often the answer is "yes" due to the AFR 60-16 preference for participation in the IFR system. This requires *controlled airspace*. You will have to research aeronautical charts, especially the Sectional. Some missions cannot be conducted in the IFR system. They usually require VFR flight ("see-and-avoid" separation): you can use uncontrolled airspace and *some* portions of controlled airspace *not* including the PCA (procedural limitations on VFR in TCAs and ARSAs too). Additionally, you may have to avoid Control Zones on a case-by-case basis. Some sorties may require IMC operations *without* an ATC clearance causing constraints. This can be done in uncontrolled airspace where the aircraft commander is his/her own clearance authority for separation from all other traffic (consider mid-air collision potential); however, in controlled airspace an ALTRV, ATCAA, MOA or other working area *may be IFR-sterilized for you ("exclusive use")* thus mitigating any interference from IFR non-participants. Even though we have a preference for the IFR system over VFR operations IAW AFR 60-16, beware of letters of agreement which *require* an IFR clearance for access to your airspace. This is often a problem with MOAs. It can prevent VFR airspace use as a backup when the IFR system breaks down, i.e., communications, radar, computer equipment failure.

Which military-use airspace designations, when inside controlled airspace, can provide you separation from non-participating IFR traffic? The list is rather long, fortunately: Restricted Areas, MOAs, Warning Areas, ATCAAs, ALTRVs, IRs, Air Refueling Tracks and Anchors, *some* Alert Areas. Alert Areas are merely charted for public information; however, some ATC facilities by practice respect the increased mid-air potential and elect to keep their IFR traffic outside. Your separation *may or may not* consist of actually sterilizing a block of airspace for your use.

Which military-use airspace designations, when inside uncontrolled airspace, can provide you separation from non-participating IFR traffic? The list is short! A Restricted Area is the only protection you have, and it segregates you from *all* non-participants. ATC should not send their known IFR traffic into uncontrolled airspace, but other unknown IFR traffic may be operating in uncontrolled airspace.

Weather Compatibility With Your Mission and/or the Airspace

Can you coexist with civilian traffic which can legally fly VFR in very marginal weather, i.e., 1 mile visibility or less in uncontrolled airspace? Sometimes we must coexist with this environment. Often the floors of MOAs and usually the floors of IRs are there. But if you can afford to limit yourself to above 1,200' AGL

(in most areas of the U.S.) and stay in controlled airspace, then you will find civilian VFR traffic limited to 3 miles visibility or more. Reference FAR 91.105 (becomes FAR 91.155 on 18 Aug 90) for these details and remember civilian traffic does not fly by our stringent AFR 60-16 VFR criteria.

Do you need to fly in IMC below 1,000' AGL (below 2,000' AGL over mountainous terrain) in sovereign U.S. airspace? This pertains to FAR 91.119 (becomes FAR 91.177 on 18 Aug 90) which has *nothing whatsoever* to do with distinctions of controlled airspace versus uncontrolled airspace or clearances. It pertains as a blanket application in U.S. airspace *anytime* you are required to fly on instruments due to weather. An IR is the *only airspace designation* which has an *automatic exemption* from FAR 91.119. How about you MOA? Technically, it isn't covered. But some aircraft have waivers to FAR 91.119 for specific missions (e.g., C-130 and MC-130), and the waiver may apply in many airspace designations. If you need to do a mission at 500' AGL in IMC in a MOA, you need to find if there is a waiver covering the mission.

Does your low-level navigation mission require basic VMC, VFR flight, at or below 250 KIAS below 10,000' MSL? And you are asserting incompatibility with the IFR system? A LATN area or SR may suffice. Aircraft usually participating are A-10, A-37, and some C-130 missions.

Charting and Lead Time

Must the airspace be charted? If so, where? Charting takes time and often is unavoidable. The need to chart airspace may be driven by self-imposed constraints in military channels as well as FAA requirements. Why? Because for safety considerations the public must be informed of our activity, especially when we need high-speed below 10,000' MSL (see Speed Exemption Letter in FAAH 7610.4) and when we need to do hazardous activity. This usually means charting in FLIP and/or on a Sectional or other aeronautical charts. *Sometimes* we can use alternative means to inform the public via media campaigns, mailouts, etc., for temporary use of airspace which we only need for a short time. The following types of airspace, by definition, require charting because of the nature of activity they imply; therefore, you may expect varying charting delays to result: Restricted Areas, MOAs, Warning Areas, IRs, VRs, Alert Areas. Temporary MOAs are sometimes processed by cutting out the charting cycle and notifying the public through mailouts, pilot forums, etc; temporary Restricted Areas are only rarely processed and are more difficult and time-consuming to coordinate.

How much time can you afford to get designated airspace? The time will *vary* depending on the type of airspace designation, its complexity, environmental problems, and controversy. Most time is consumed by the following: (1) requirements to consult the public during SUA proposals; (2) negotiating access to controlled airspace, and impact on ATC services and other airspace users; (3) a drawn out environmental process due to significant environmental impact; (4) waiting for the airspace to be charted when required. Other unanticipated delays (e.g., ATC videomapping, computerization, and controller briefings) may surprise you as well. When you decide on an appropriate airspace category, keep the above four factors in mind, review estimated charting and lead time estimates earlier in this handout, and don't commit to something unworkable.

Operational Radius

How far can your planned activity be from your base? The performance characteristics of your aircraft will drive this problem, and it boils down to how much fuel and time you can afford en route to and from your airspace. The less fuel consumed en route the better, but there is a *maximum* acceptable amount which you need to determine (*a mission "drop dead" distance*). The following sample problem shows you how this can be done. Keep in mind many sorties do not return to the base where they took off; however, the basic philosophy of fuel planning always applies limitations to airspace use. Remember too that you are figuring *air miles* that must be travelled, which is not

necessarily "as the crow flies". Departure and recovery procedures could easily cut the "straight line" operational radius in half.

OPERATIONAL RADIUS PROBLEM

1. TOTAL FUEL LOAD: 60,000#
2. FUEL FOR START/TAXI/TAKEOFF: 3,000#
3. FUEL FOR CLIMB TO SELECTED ALTITUDE: 6,000# IN 30 NM
4. REQUIRED FUEL/TRAINING TIME IN DESIGNATED AIRSPACE: 30,000# / 1.5 HOURS
5. REQUIRED FUEL AT IAF: 15,000#
6. EN ROUTE CRUISE AIRSPEED/FUEL FLOW: 360 KTAS / 15,000# PER HOUR FF
7. FIND OPERATIONAL RADIUS, AIR MILES YOU CAN AFFORD EN ROUTE.

TOTAL FUEL LOAD		60,000#	
MINUS START/TAXI/TAKEOFF		-3,000#	
MINUS CLIMB FUEL		-6,000#	
MINUS FUEL IN AREA		-30,000#	
MINIMUM FUEL REQUIRED AT IAF		-15,000#	
FUEL AVAILABLE EN ROUTE	=	6,000#	
TIME AVAILABLE EN ROUTE			
6,000# / 15,000# FF x 60	=	24	MINUTES
AIR MILES AVAILABLE EN ROUTE			
24 MIN x 360 KTAS / 60	=	144	NAUTICAL MILES
OPERATIONAL RADIUS			
1/2 EN ROUTE AIR MILES AVAILABLE	=	72	NAUTICAL MILES

NOTE: In this problem, the 30 NM climb distance (see Item 3 above) was not included in the operational radius. Rather it is considered a time and fuel "pad". Don't forget, circuitous routing can do strange and bizarre things to your operational radius.

What suitable airspace is available within your operational radius? Search aeronautical charts, FLIP, ask sister military units, HHQ, and the AFRep. If the proper category of airspace is conveniently located, it must still have satisfactory scheduling prerogatives available if you are to rely on it: how far in advance can you commit yourself to a firm schedule, how often must you use the airspace, etc.?

What if you must exceed your operational radius? Obviously, you will have less time and fuel in the designated airspace. Then you must present both tangible and intangible costs of the mission degradation; i.e., additional sorties required to be flown, loss of combat readiness, etc. Whenever possible translate these costs into dollars and cents--folks can better relate when costs are placed in finite and understandable terms.

PLAN AHEAD FOR THOSE ROADBLOCKS AND DETOURS!!!

APPENDIX B

EXAMPLE DOPAA

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action is the establishment of a military training route (MTR), VR-1111/1112, in airspace located in northern New Mexico (near Santa Fe) and southern Colorado (near Pueblo). Fig 2.1 shows the proposed route location and configuration. VR-1111 and VR-1112 comprise the same airspace but are designated separately to indicate directional usage. VR-1111 starts at the southeast corner of the route, ending on the southwest; VR-1112 starts at the southwest corner and ends at the southeast. The MTR would provide low altitude training opportunities for aircraft enroute to an existing air to ground gunnery range (Airburst Range) under restricted area R-2601 located on the Ft Carson Military Reservation in Colorado. In addition, a portion of the route passes under the La Veta Low Military Operating Area (MOA). This presents an opportunity for low altitude, air to air training (LOWAT) as well.

Existing usage of Melrose, Oscura and Red Rio ranges in New Mexico is becoming saturated, therefore decreasing availability to meet training requirements. Access to a range via a MTR has become a critical need in order to maintain wartime readiness for flying units proposing to use the airspace.

Table 2.1 shows the expected level of use for the proposed MTR airspace. The primary users of the MTR would be the 150 Tactical Fighter Group (TFG) of the New Mexico Air National Guard located at Kirtland AFB, NM, and the 140 TFG of the Colorado Air National Guard located at Buckley Air National Guard Base, CO. Both of these units fly A-7 aircraft. The scheduling agency for the MTR would be the 150 TFG.

In addition to the two ANG units, the 27 Tactical Fighter Wing (TFW) from Cannon AFB, NM, and various Strategic Air Command (SAC) units are expected to use the proposed route enroute to R-2601. Sortie rates are based on one pass from designated entry and exit points. Utilization of the MTR is distributed among VR-1111 (point A to point C) and VR-1112 (point G to point C) based on operational training requirements and aircraft range (figures to be provided). This breakout allows for a more diversified training scenario. Additionally, the proposed route is of sufficient width (20 to 40 nautical miles) to allow aircrews to select a variety of navigation points. This provides an infinite number of navigation points and allows diversity of low level navigation training. Other visual routes in the general area (e.g. VR 1174/1574, VR 412/413, VR 176,

Table 2.1 VF-1111/1112 PROJECTED AIRSPACE USAGE

Unit	Aircraft Type	Monthly Sorties East Leg	Monthly Sorties West Leg	Formation	Entry/Exit Points	Speed (KIAS)	Altitude (AGL)	Power Setting
150 TFG Kirtland	A-7	52[1]	52[1]	2 ship/ 4 ship	A/C,G/C	450	100'	91%
140 TFG Buckley ANGB	A-7	61[2] 4	61[2] 4	2 ship/ 4 ship	B/C,D/C,E/C A/C,G/C	450	100'	91%
27 TFW Cannon AFB	F-111	39[3]	13[3]	1 ship 2 ship	A/C,G/C	480	100'	95%
SAC	B-1B	39[4]	13[4]	1 ship	A/C,G/C	550	500'	85%
	B-52	39[4]	13[4]	2 Ship	A/C,G/C	340	600'	90%
Other	MC-130	11[5]	11	1 ship	A/C, G/C	<250	100'	
	Misc	11[5]	11	1 ship/ 2 ship	A/C, G/C	450	200'	

1. 4 sorties/day x 6 day week x 52÷12 = 104 sorties (50% split: 52 each leg)
2. 6 sorties/day x 5 day week x 52÷12 = 130 sorties (50% split: 65 each leg segment)
3. 2 sorties/day x 6 day week x 52÷12 = 52 sorties (75% E/25% W split: 39 E leg, 13 W leg)
4. 2 sorties/day x 6 day week x 52÷12 = 52 sorties (75% E/25% W split: 39 E leg, 13 W leg)
5. 1 sorties/day x 5 day week x 52÷12 = 22 sorties (50% split: 11 E leg, 11 W leg)

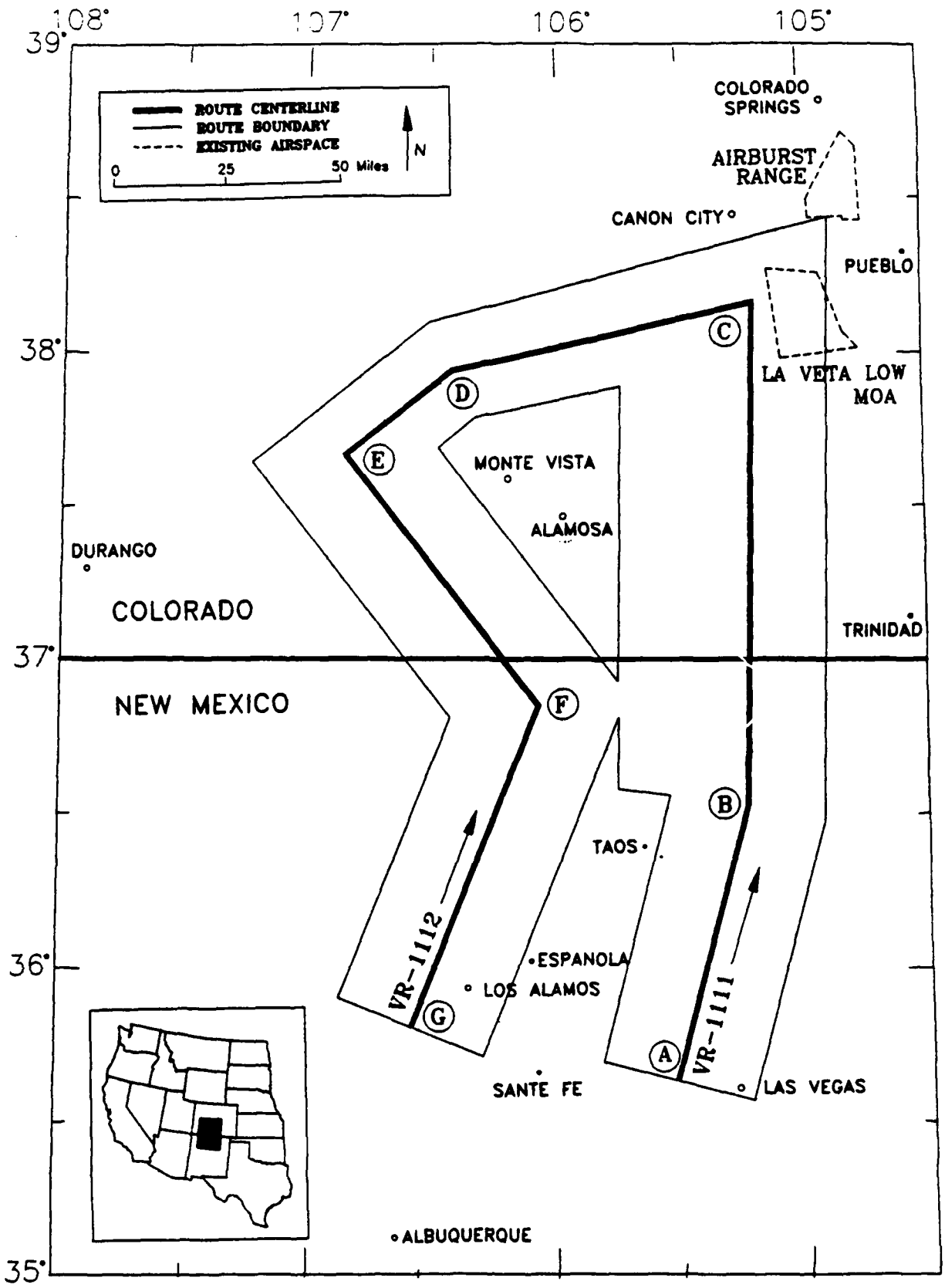

FIG. 2-1 VR-1111/VR-1112 PROPOSED MILITARY TRAINING ROUTI

and VR 1195/1107) do not afford this training. All segment points of the route are to be established as alternate entry and exit locations. A typical mission would involve two or four aircraft operating between 350 and 550 knots indicated airspeed (KIAS) at 100-300 feet above ground level (AGL).

Typical mission duration in the MTR would be 20-30 minutes during daylight (0900-1600 local) hours. Occasionally a mission would be scheduled for early evening (1700-2100) hours. Less than one percent of all flight activity would take place after 2200 hours. When they do occur, nighttime sorties would generally be flown at 500 feet AGL. All missions would be flown at subsonic speeds.

2.1.1 Description of Air National Guard (ANG) Operations

Existing restricted area airspace and air to ground gunnery ranges underneath these airspaces are used to maintain pilot currency/ qualification status in weapons delivery. Pilot proficiency in low level flight conditions is also necessary. The existing wartime mission(s) of the units proposing to use the airspace requires this training and proficiency to ensure survivability in today's combat environment. An optimum training scenario is one that combines elements of low level training and air to ground gunnery training in a single sortie. Establishment of VR-1111/1112 would provide users with access to the air to ground gunnery range at Ft Carson while at the same time provide substantial low altitude navigational training to aircrews.

Under this proposal, a typical training scenario for the 150 TFG from Kirtland AFB would begin by departing from the joint runway shared by Kirtland AFB and Albuquerque International Airport. Aircrews will fly under Instrument Flight Rules (IFR) conditions at high altitudes enroute to VR-1111/1112. Once clear of air traffic or at approximately 30 nautical miles from Albuquerque (ABQ), aircraft begin to descend to either one of the MTR start points in tactical formation (10,000 feet separation laterally between aircraft elements with the second element 30-60 seconds in trail). Aircraft accelerate to enroute speed (450 KIAS) and fly low level profile along VR-1111 or VR-1112 to R-2601. Aircrews would only enter the range airspace area previously scheduled and only when cleared by the Range Control Officer on duty. Aircrews generally spend 25 minutes in the restricted area where air to ground gunnery tactics can be employed. Once completed, aircraft then climb to approximately 20,000 feet AGL for an IFR return to ABQ. Alternatively, the training scenario may involve a high altitude IFR flight plan into R-2601 and a low level MTR profile return. These scenarios would involve a total flight time of 1 1/2 hours of which only 20-30 minutes is low altitude flying in the proposed MTR. A-7s can not fly low level both to and from R-2601 because they lack sufficient fuel.

The 140 TFG aircraft will follow the same general procedure-high altitude IFR enroute to low altitude VFR from Buckley ANGB, or exiting from a nearby air refueling track. A-7 aircraft from the 140 TFG will not normally enter the proposed route at start point A for VR-1111 or start point G for VR-1112. Usage will be concentrated along segments B-C of VR-1111 and E-D-C of VR 1112. Fight time in the MTR at low level for the 140 TFG aircrews would be less than 30 minutes.

Delivery of live munitions is prohibited in the air to ground range under R-2601. An existing impact area located within the Ft Carson boundaries has been previously assessed and approved for live ordnance delivery. Therefore some aircraft may carry live munitions through the proposed MTR. The 150 TFG estimates the probability to be extremely low and only during composite force training (CFT) exercises or operational readiness inspections (ORIs). The 140 TFG estimates their requirement to be once in every six months when 12 sorties would be required to transport ordnance (typically MK82s). All other ordnance carried by aircraft would be inert.

2.1.2 ANG FLIGHT RESTRICTIONS

It is Air Nation Guard (ANG) policy to implement flight restrictions and special operating procedures in accordance with existing Federal Aviation Rules (FAR) and Air Force regulations. The following restrictions will apply:

- Avoid Airports: To ensure adequate separation with civilian air traffic, aircrews using VR-1111/1112 will not fly lower than 1,500 feet AGL within a three nautical mile radius of airports and airfields as defined and depicted in Flight Information Publications (FLIP).

- Avoid Populated Areas: It is ANG procedure (compliance with FAR 91.79 and AFR 60-16) to not fly closer than 500 feet to any person, vehicle, vessel, or structure. Additionally, cities, towns, small communities and other congested areas are overflown at 1000 feet AGL or higher. The following towns and small communities have been identified as meeting this criteria: Las Vegas, NM; Taos, NM; Los Alamos, NM; Cimmaron, NM; Eagle Nest, NM; San Louis, CO; Ft Garland, CO; Blanca, CO; La Veta, CO; Saguache, CO; Rome, CO; and Manassa, CO.

2.2 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

2.2.1 Alternative Locations for the Proposed Action

Two primary requirements were considered in selecting the location of proposed VR-1111/1112 (Fig 2.1). First, the route needed to access an existing range with associated restricted airspace and available range time within the unrefueled flying radius of the 150th TFG. The only available range that met this requirement was Airburst Air to Ground Gunnery Range in southern Colorado. Airspace usage at other existing ranges is becoming saturated and unavailable for use. Further discussion of this action appears in Sections 2.2.2 and 2.2.3. Second, to ensure sufficient training below 500 feet AGL the routing had to avoid populated areas and airways. To satisfy the first objective the north and south boundaries of the proposed route need to remain essentially fixed. To meet the second criteria a majority of the route is located over rugged mountainous terrain at altitudes that rarely conflict with commercial or general aviation approach/departure routes around nearby airports and airfields, and is sparsely populated. Moving the boundaries of the proposed route to the east or the west would result in military overflight of open and sometimes populated areas and increase the potential for airspace conflicts and disturbance. In addition, the Alamosa, Monte Vista, Las Vegas, and Maxwell National Wildlife Refuges would restrict east/west movement of the route boundaries. For these reasons, no other route alternatives are acceptable.

2.2.2 No Action Alternative

Currently the 150 TFG maintains its air to ground gunnery proficiency using the Melrose Range under restricted area R-5104 near Cannon AFB, New Mexico. The range is accessed via VR-1107 from the west or VR-1105 from the north. Both VR-1107 and VR-1195 are scheduled by the 150 TFG. Melrose Range is heavily used for low level weapons delivery. In 1988 there were approximately 5500 sorties flown on the range. Primarily these involved F-111 fighter aircraft from the 27 TFW at Cannon AFB. In 1989, SAC has requested to increase the low level activity on Melrose Range for the B-52, B-1B, and FB-111 aircraft from 72 sorties to 2,500 sorties per year. In addition a new squadron of F-111 aircraft will be moved to Cannon AFB and create additional demand for range time. It is forecast that saturation of the Melrose Range in addition to higher priority HQ TAC directed missions could, on many occasions, preempt ANG scheduled times on the range. This will result in the training requirements of the 150 TFG and other units not being met; therefore, combat readiness of these units will be compromised. Oscura and Red Rio ranges in the R-5107 complex south of Holloman AFB, New Mexico, have also been previously used by 150 TFG

aircraft. Both ranges have reached saturation with AT-38 aircraft. In addition, Air National Guard aircraft are assigned a low scheduling priority for both ranges.

2.2.3 Use of Other Existing Airspace

There is currently no available air to ground range connected by a low level MTR within the local flying area of the 150 TFG so that low level navigational missions can be integrated with air to ground gunnery training missions. Without the proposed route, access to Airburst Range can be accomplished by flying at higher altitudes enroute to existing low level route segments. Aircraft can enter alternate entry point E on existing VR-412, fly to alternate entry point G on existing IR-409, and enter Airburst Range via IR-409 (figures to be provided). This operation would involve 23 minutes of enroute time at high altitude and only 10 minutes of low level training (assuming a speed of 450 knots). A similar sortie using existing VR-413 and connecting to the same segment of IR-409 for entry into Airburst Range is also possible. This operation would involve 24 minutes of enroute time at high altitude and only 12 minutes of low level training (assuming a speed of 450 knots). This duration will not meet the low level training requirements of the units proposing to use the airspace unless multiple or increased number of sorties are authorized. This is not possible due to increased need for fuel economy and lack of fuel resources for the units.

Low altitude navigational training would be conducted independent of air to ground training missions by using existing VF-1107/1195 and VR-176. Additional sorties would have to be generated to fulfill the air to ground training requirement. Again, lack of fuel resources would render this alternative impractical.

APPENDIX C

EXAMPLE FONSI WITH MITIGATION

AND

EXCERPT FROM SAC FORT DRUM/IR-806 MITIGATION AGREEMENT

FINDING OF NO SIGNIFICANT IMPACT

1.0 NAME OF ACTION:

Introduction of Strategic Air Command (SAC) aircraft (B-52, FB-111) into the existing US Army, Fort Drum Weapons Range, located northeast of Watertown, New York. SAC will enter the weapons range via low-level route IR-806.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

SAC is proposing to use IR-806 and the Fort Drum Weapons Range for low altitude weapons delivery training. An average of 100 sorties per month would be scheduled on the proposed route, IR-806 and existing low level routes, IR-801 and IR-700. These sorties would replace the existing 98 scheduled monthly sorties along these routes. SAC expects about 60 percent of the sorties to be B-52s and 40 percent to be FB-111 aircraft. Each aircraft would make an average of three passes over the range using the IR-806 racetrack. Fewer sorties (about 5 percent or less) would be expected on IR-801 or IR-700, and these sorties would not involve weapons delivery at the Fort Drum Range. The average scheduled sortie limit of 10 per month would not be exceeded for all three routes combined.

The B-52 aircraft will drop BDU-48 and BDU-50 practice weapons at an average speed of 370 KIAS. The FB-111 will drop BDU-50 and MK-106 practice weapons at an average speed of 450 KIAS. All activities are subsonic and practice munitions are nonexplosive (inert); thus, meeting all range requirements for weapons safety. Typically, the range and route would be used by a formation of two to three of the same-type aircraft, flying 5 to 6 miles apart and making three passes by each aircraft over the range.

The Fort Drum Weapons Range is controlled by Fort Drum and used primarily for ground training by the 10th Mountain Division and low-level weapons practice by Air National Guard (ANG) aircraft. The proposed route IR-806 would be located in northcentral New York. This route would overlap most of the existing SAC route IR-801 and a portion of another existing route IR-700. The proposed route IR-806 begins near Montpelier, Vermont and terminates north of Syracuse, New York.

The environmental assessment (EA) has been prepared to meet the administrative requirements of Air Force Regulation (AFR) 55-84, Reducing Flight Disturbance; and AFR 19-2, the Environmental Impact Analysis Process, and Army Regulation (AR) 200-2-2, both of which implement the National Environmental Policy Act.

Seven alternatives to the proposed action were considered, but not carried forward: 1) Institution of the Conventional Enhanced Release Training (CERT) Program; 2) Development of a SAC Weapons Range in the Strategic Training Range Complex (STRC) in the northcenteral portion of the United States; 3) Utilization of Canadian Ranges; 4) Utilization of Other Existing Ranges in the United States; 5) Route Alternatives (build a new instrument route or visual route); 6) Delay-Action Alternative; and 7) No Action.

Institution of the CERT Program is currently underway at four SAC bases. The CERT Program will help alleviate oversaturation of the existing ranges that SAC is attempting to access. However, this program only partially fulfills SAC's weapons delivery requirements because only one type of aircraft (B-52) and munitions (BDU-48) are used in the program. The development of SAC weapons ranges is a viable but long-term alternative that will require approximately two to five years (or longer) to accomplish. Because of the long-term nature of the program and SAC's immediate need for access into existing ranges, this alternative is deemed not feasible at this time. Use of Canadian ranges involves dealing with the sovereign airspace and properties of another country. The US military uses Canadian airspace only by invitation. SAC is currently accessing a number of weapons ranges throughout the United States. However, distance precludes ready access to SAC units based in the Northeast. The Fort Drum Range will be used by four Air Force bases, Plattsburgh, Pease, Griffiss, and Loring because of its close proximity (within 500 nautical miles), thereby saving the Air Force flying time and fuel costs. To build a new route, (be it instrument route or visual route), would not be feasible because airspace in upstate New York is already heavily used and developing a new route would create environmental concerns. Aircrews would not be able to fly a low-level route nor obtain low-level training by flying visual flight rules rather than on a published route. In addition aircraft would not be able to accelerate above 250 knots until on the range. This is less than typical combat airspeed and would not provide realistic training. The delay-action alternative for the proposed action is not feasible because delaying the action would reduce the potential for SAC aircrews based in the northeast to develop and maintain flying proficiency. Delaying the action would not change the environmental impacts. The no action alternative would not allow SAC to fulfill its mission requirements. If more distant ranges had to be accessed, savings in fuel consumption and flying time would not occur.

3.0 SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS

3.1 Geology: The proposed action would have no significant impact on soils within the range or geologic structures beneath the routes. Ordnance debris from the inert munitions dropped by SAC aircrews onto the range's main impact area would not contaminate the soils.

Water Resources. Water consumption in the project area would not increase as a result of the proposed action. Leaching of chemicals from ordnance debris into either surface waters or groundwater supplies would not constitute a significant impact. The proposed action would have no effect on water resources located under the routes.

Air Quality. The proposed action would result in an increase in air pollutant emissions by aircraft along IR-806 but a corresponding decrease along IR-700. The emissions would be intermittent at a point in space, occur at least 500 feet AGL, and be dispersed over a large area. No ground-level pollutant concentration standard would be exceeded. Consequently, the proposed SAC low-level training is not expected to have a significant impact on air quality.

Biological Resources. The potential effects of SAC low-altitude flights on biological resources could involve disturbance of wildlife. This is considered insignificant except possibly in cases involving nest sites of threatened and

endangered species and two wildlife management areas. Potential impacts would be mitigated with the implementation of various mitigations described in the EA. Potential impacts specifically to the Lake Champlain-Adirondack Biosphere Reserve are not considered significant because the proposed action entails a net reduction in low-level flying over the proposed Reserve.

Visual Resources. Potential visual intrusiveness of SAC aircraft in the Adirondack Park would decrease if the proposed action were implemented. Wilderness areas under the portion of IR-700 that cross the central part of the Adirondack Park would experience a reduction of overflights. Mitigation measures instituted in the proposed action would minimize impacts on visually sensitive areas such as Jay Mountain and Grant Mountain wilderness areas.

Land Use. Potential effects upon land use would result if the proposed action conflicts with the goals and objectives of land use management plans. Aircraft-generated noise has the potential to disrupt noise-sensitive residential and recreation areas. Given the reduction of sorties over sensitive areas in the central Adirondack Park and the implementation of vertical and horizontal stand-off mitigative measures, land use impacts are not expected to be significant.

Noise. Given the proposed reduction of sorties along IR-700, noise generated by SAC aircraft would decrease in the central portion of the Adirondack Park and increase near the propsed IR-806 racetrack. Though low-flying bombers can generate peak sound levels of about 105 dB for a few seconds, the overall sound would not last more than a minute and the noise-intrusive events (aircraft sorties) would occur infrequently. Average sound levels would be below 65 Ldn or Ldnmr. Potential noise effects on sensitive areas would be minimized through implementation of mitigation measures, including a comprehensive monitoring program.

Socioeconomics. Population size and distribution near the Fort Drum Range and under the low-level routes would not be affected by the proposed action. Public acceptance of SAC flights would vary depending upon the area affected. Though the IR-806 racetrack was designed to avoid population centers, public response to low-level flights in the vicinity of the Fort Drum Range, particularly for people living under the racetrack, may not be positive. Avoidance of sensitive receptors in this area, along with other mitigative measures, should minimize any decrease in public acceptance in this area. Given the reduction of low-level sorties through the central part of the Adirondack Park, public acceptance in these areas should increase. Other areas along the route should experience little or no changes in public acceptance of low-level flights. There would be no discernible impact on economic activities near Fort Drum or under the routes. No significant impacts are expected.

Airspace. Though the proposed action would result in a change in airspace utilization in upstate New York (i.e., the shift from IR-700 and IR-801 to IR-806, and the IR-806 racetrack), there would be no conflicts with prevailing airspace usage. No significant airspace impacts would be expected.

Air Safety. Mishap rates for SAC B-52 and FB-111 aircraft are low. Most of the accidents that have occurred in recent years have been runway accidents. SAC low altitude training in upstate New York is not expected to significantly increase the likelihood of a mishap. Aircrew training and awareness, in addition to schedule adjustments during bird migratory periods, would reduce

bird-strike potential. Since the amount of flight activity would remain virtually unchanged and the probability of a mishap is low, the proposed action would not have a significant effect on air safety.

4.0 CONCLUSIONS:

SAC has worked closely with the New York Department of Environmental Conservation (DEC) to minimize impacts to the environment. To continue to respond to public comments on potential impacts, SAC will initiate a monitoring program while conducting operations on a one-year trial basis, to gather data on potential impacts to threatened and endangered species. This monitoring program will be done in cooperation and coordination with DEC, state, federal and local officials.

SAC will continue to consider further mitigation measures and make reasonable and timely adjustments to their activities in response to public concerns. SAC does recognize the specific concerns of those that live around the IR-806 racetrack and will make altitude or other appropriate adjustments, where operationally feasible. For example, an adjustment was made to maintain the FB-111 aircraft within the Restricted Area (Range) to avoid noise impacts to individuals. Other adjustments to certain segments of IR-806 have already been made to avoid wilderness areas by overflight at not less than 2,000 feet above ground level. Public comments are welcome for one-year from the commencement of the trial period of operations. SAC's initial operation period will commence on 5 June 1989. Before SAC's decision on a long-term commitment to the Fort Drum and IR-806 proposal, SAC will prepare a supplemental EA that will reconsider the findings of this FONSI. If significant impacts are found, SAC will prepare and file an environmental impact statement (EIS) based upon the findings of the one-year monitoring program.

From this, and a review of the EA, along with the public comments and all the mitigation instituted to avoid adverse impacts, I have concluded that this action will not have a significant impact on the environment. This Finding of No Significant Impact (FONSI) is based upon the minimal noise and air emissions increases, the minimal impacts to the human and natural environments, and the fact that SAC will limit their scheduled sorties to an average of 100 per month. The Air Force, in this decision, and as documented in the EA, has employed, and will continue to use all practicable means to minimize the impact of this action on the local environment. The Air Force is committed to the policy of being a good neighbor and will continue to evaluate impacts caused by its operations as more data becomes available, particularly in regards to noise impacts of jet aircraft operations on humans, farm animals and wildlife. During the course of the SAC monitoring progam, additional mitigation measures will be considered as appropriate in consultation with the affected parties.

DONALD O. ALDRIDGE DATE:_____
LIEUTENANT GENERAL, USAF
CHAIRMAN, EPC

EXCERPT FROM SAC FORT DRUM/IR-806 MITIGATION AGREEMENT

MITIGATION IDENTIFIED IN ENVIRONMENTAL ASSESSMENT

4.1 As identified in the environmental assessment (page 165), SAC has agreed to implement the following operating procedures to minimize potential impacts and has submitted these changes to the Flight Information Publication (FLIP) for aircrews to follow:

4.1.1 Five Ponds Wilderness. The route description for IR-806 in the FLIP will be changed to require aircraft to fly 3,500 feet MSL (2,700 feet AGL) from point H to point I.

4.1.2 Jay Mountain Wilderness. The route corridor for IR-806 will be expanded from AL to point AM by an additional 3 miles for a total of 7 miles east of the centerline. A Standard Operating Procedure (SOP) will be added to the FLIP requiring aircrews to remain right of the centerline from point AL to AQ to avoid environmentally sensitive areas, particularly Jay Mountain Wilderness between points AL and AM.

4.1.3 Wildlife habitat north of Jay Mountain. A SOP will be added to the FLIP requiring aircrews to avoid sensitive habitat areas by flying at least 1.5 NM east and north of the IR-806 centerline between points AM and A.

4.1.4 Wildlife management areas on the IR-806 racetrack. A SOP would be added to the FLIP requiring aircrews to avoid the Fish Creek management area and the Upper and Lower Lakes management area by 1 NM between IR-806 points D and C. A sensitive habitat area immediately west of point D will be avoided by 1.5 NM. In addition, by flying south of point D and continuing around the curve of the IR-806 racetrack, direct overflights of the dairy farming area along Route 67 in St. Lawrence County will be eliminated.

4.1.5 Wildlife habitat between Old Forge and Jay Mountain. A SOP will be added to the FLIP requiring aircrews to avoid sensitive habitat areas by flying at least 1.5 NM south of the IR-700 centerline between points H and AL from March 15 through the first week of September.

4.1.6 Fish Creek Management Area, Upper Lower Lakes Management Area, Established Recreation Areas. Avoid by horizontal and vertical separation (altitude).

4.1.7 Nesting Sites. Avoid all bald eagle, peregrine falcon and osprey nests between March 17 - September 7.

4.1.8 Population Impacts.

4.1.8.1 Reduce the number of overflights along IR-700.

4.1.8.2 Minimize startle effect by advising public when low-level flights would occur.

4.1.8.3 Over congested areas, such as cities, towns, settlements and persons, must have at least 1,000 feet above highest obstacle within 2,000 feet radius of aircraft.

5. SAC PROPOSED MITIGATION AND MONITORING

5.1 SAC has agreed to the mitigation identified in the EA and to most of that highlighted in the 23 May 89 letter which is the entire Section 4 above. The following monitoring and research studies can be accomplished by SAC.

- Investigate the potential impacts on domestic animals (dairy cattle and horses), giving consideration to losses due to injury and potential to accidents due to startle effects.

-- This study will be managed by the Armstrong Aerospace Medical Research Laboratory (AAMRL/NSBIT), Noise and Sonic Boom Impact Technology Program at Wright-Patterson AFB, Ohio. A consultant for NSBIT will be hired to conduct the study, which will include a study on effects on dairy cattle milk production, the trauma effects on penned cattle, and the startle effect on dairy cattle and horses. Two study plans are currently being developed, with completion due by 30 July 1989. The research study will most likely commence by mid-August 1989.

- SAC will furnish quarterly status reports to the interagency committee. Regularly scheduled interagency meetings (as-needed basis) will be held in various locations (Albany, Syracuse, Ray Brook, and other designated locations) to discuss the monitoring program.

- Within the racetrack, SAC will raise the altitude as depicted in the attached map (Figure 1).

- SAC will conduct public informational meetings as needed. The first meeting will be held approximately one month after flying operations begin. The meetings will be held to inform the public of the status of the flying activities and the development of the monitoring program. We will also take comments from the general public.

- SAC will install a "1-800" number. The number will be made public and a log of all calls will be kept by the SAC Environmental Management Office (DEVP).

- Flying Operations Information: The last demonstration of B-52s will be conducted on 7 July 1989 (10:30 - 11:30 a.m.) on IR-806. However, the following is the routine schedule and will be typical operations:

12:00 - 4:00 p.m. Mondays
8:00 - 12:00 a.m. Tuesdays

No flying activities on 17, 18, 24 and 25 July 1989. At least one day's advance notice will be given to the public of flights outside this schedule. SAC has requested a routine schedule from the Fort Drum scheduling office and is awaiting confirmation.

- SAC has included in this document two forms: (1) A noise complaint form, and (2) a legal claims form for use by the general public. These forms can be mailed to:

Ms. Gloria A. Hagge
HQ SAC/DEVP
Offutt AFB NE 68113

- During the course of the SAC monitoring program, additional mitigation measures will be considered as they are identified not only by affected parties, but also by the interagency committee and other federal, state and local organizations.

5.1.1 Section 3 of the Plan identified the monitoring and research studies proposed by DEC staff. Because of the Air Force's established research and development program and programmed funding, SAC cannot commit to conducting independent research that will duplicate such research. The Air Force programs and funds research years in advance. Studies are carefully planned, sometimes taking up to 2-3 years to develop a study plan for any particular research. As identified in Section 2, the Air Force is already conducting studies on several threatened and endangered species in various parts of the country, such as the peregrine falcon and bald eagle in Alaska. NSBIT is also conducting research studies on noise impacts to humans. The following DEC recommendations cannot be conducted due to duplication of research effort:

- SAC cannot conduct any monitoring, surveying, or research on potential impacts to recreationalists within wilderness areas, wild forest areas, campgrounds, wildlife management areas due to duplication of effort. The Air Force's GEIS will address the potential impacts to recreationalists. The draft GEIS is due for public review in September 1989. It is suggested that DEC review this document and furnish their concerns.

5.1.1.1 Social Studies: Health impacts to humans cannot be researched by SAC. The Armstrong Aerospace Medical Research Laboratory (AAMRL), NSBIT Program has programmed this research and is currently doing this work.

5.1.1.2 Biological Studies: All field-oriented biological studies must be coordinated and approved by the Air Force Director of Laboratories, the NSBIT Program, and HQ Air Force. All studies must have a thorough, scientifically designed plan, which generally takes considerable time to prepare. The dairy cattle and horses study constitutes a biological study; SAC cannot study any other species due to duplication of research effort.

- The distribution of opinion surveys/questionnaires can be developed by local officials rather than by SAC. SAC is opposed to placing questionnaire on parked cars or sending out questionnaires. However, local officials can do this if they choose.

APPENDIX D

EXAMPLE OF FONSI

FINDING OF NO SIGNIFICANT IMPACT

1.0 NAME OF ACTION:

Introduction of Strategic Air Command (SAC) aircraft (B-52, B-1B, FB-111) into the existing Tactical Air Command (TAC) Melrose Range, Cannon AFB NM and TAC-owned low level route IR-1077 for low altitude flight operations.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

SAC is requesting approval to use IR-107 and the Melrose Range for low altitude weapons delivery training. SAC's projected use of the Melrose Range and IR-107 is an average of 40 sorties per week. All activities will be conducted during the daytime. The B-52 aircraft will drop BDU-48 and BDU-50 practice weapons at an average speed of 370 KIAS. The FB-111 will drop BDU-50 and MK-106 practice weapons at an average speed of 450 KIAS, and the B-1B will drop BDU-33, BDU-38, and MK-106 practice weapons at an average speed of 500 KIAS. All activities are subsonic and practice munitions are nonexplosive (inert); thus, meeting all range requirements for weapons safety. Those munitions used to simulate light ordnance contain a charge equivalent to two shotgun shells, plus a plume of phosphorus smoke for visual scoring. Practice munitions used to simulate heavy weapons are composed of approximately 500 pounds of concrete.

The Melrose Range is primarily used for low level weapons delivery training. In 1988, TAC F-111D fighters flew 4,145 sorties on the range; the Air National Guard (ANG) activities were about 1,082 A-7 sorties; the Naval Weapons Evaluation Facility (NWEF) activities included about 140 sorties by A-6s, and A-7s, and F-18s. SAC operated 72 sorties of B-1B, B-52 and FB-111 bombers.

The proposed action in the Melrose Range and IR-107 low level route will not incur a significant change from current operations and the boundaries of the range complex would remain the same. This environmental assessment (EA) has been prepared to meet the administrative requirements of Air Force Regulation (AFR) 55-34, Reducing Flight Disturbance and AFR 19-2, the Environmental Impact Analysis Process.

Four alternatives to the proposed action were considered, but not carried forward: 1) no action, 2) institution of the Conventional Enhanced Release Training (CERT) Program; 9) development of new SAC ranges in the Strategic Training Range (STRC) in the north central portion of the United States; 4) construction of a new instrument route (IR), visual route (VR) or fly visual flight rules (VFR) with no route. The no action alternative would not allow SAC to fulfill its increased mission requirements and the quality of training for SAC aircrews would not be upgraded. Institution of the CERT Program is currently underway at four SAC bases. The CERT Program will help alleviate oversaturation of the existing ranges that SAC is attempting to access. However, this program only partially fulfills SAC's weapons delivery requirements because only one type of aircraft (B-52) and munitions (BDU-48) are used in the program. The development of SAC weapons ranges is a viable but long-term alternative that will require approximately two to five years (or longer) to accomplish. Because of the long-term nature of the program and SAC's immediate

need for access into existing ranges, this alternative is deemed not feasible at this time. Constructing a new IR or VR does not support SAC's immediate need to gain access to Melrose Range due to the route developmental period, from initial site visits to publication in the Flight Information Publication (FLIP). To fly VFR with no route would hamper SAC's ability to effectively train aircrews and would complicate weapons release.

3.0 SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:

3.1 Air Quality: Air quality in the project area is very good. The project area in Idaho, Utah, Nevada, and Oregon is presently designated as an attainment for all criteria pollutants by the EPA. An increase in localized ground-level pollutant concentrations from the proposed 40 daily sorties would be small for the following reasons: 1) aircraft emissions would be intermittent at a point in space, 2) emissions would occur at least 800 feet above ground level, 3) emissions would be spread over a large geographical area, and 4) emissions would be well dispersed at ground level due to aircraft wake effects. As a result, no ambient air quality standards are expected to be exceeded.

3.2 Wildlife: A number of studies have been documented involving low level overflights by aircraft including jet fighters and bombers. Raptors, including the bald eagles, have exhibited minimal response to such overflights and no long-term effects have been demonstrated. However, the scientific community agrees that at this time there is not enough hard data available to substantiate definitive conclusions about long-term impacts to wildlife from military jets. Long-term studies are currently underway. At this time, it is concluded that the proposed action will result in an insignificant disturbance to raptors and other wildlife. In doing this, SAC aircraft will avoid overflights of large surface water bodies along IR-107 between November and March. This procedure is adopted at the recommendation of the USFWS and is intended to preclude impacts on migratory waterfowl and wintering bald eagles.

3.3 Cultural Resources: A recent survey of 10,000 acres of the Melrose Range suggests that few cultural resources are likely to be located within the impact area and most are surface manifestations with few artifacts. Because of the low density of sites on the range, the probable lack of significant sites on the range, the probable lack of significant sites within existing impact zones, and the limited amount of anticipated ground disturbance, the New Mexico State Historic Preservation Office (SHPO) indicated that the proposed action would not result in significant impacts to cultural resources.

3.4 Noise: The implementation of the proposed action to the Melrose Range and along IR-107 is expected to result in an insignificant impact. The noise methodology used to analyze the proposed noise level for the subject aircraft and to determine the significance of environmental impacts indicates that the estimated daily average noise levels for the subject aircraft would not increase by more than 4-5 dBs on the range (unpopulated area) to 1.5 dB off range.

3.5 Socioeconomics: There is no expected in-migration or out-migration associated with the proposed action; therefore, the proposed SAC activities at the Melrose Range and low level routes IR-107 would not affect the population beneath the airspace. Economic impacts to industry, such as tourism, would also not be impacted significantly.

3.6 Accident Hazards: The proposed action would increase air traffic along IR-107 and over the Melrose Range. Given the number of flying hours associated with the proposed action, there is an expected increase in the probability of accidents occurring. Based on SAC-wide experience from 1980 through 1985, the mishap rates per 100,000 flying hours are 1.01 percent per year for the B-52 and 3.86 percent per year for the FB-111. No more recent data is available for these aircraft. Several B-1B mishaps have occurred in recent years, but no rate is available. Given the estimated flying time for the aircraft, the probability of a B-52 accident would be 0.9 percent per year, and the probability of a FB-111 accident would be 1.6 percent per year. Thus, the impacts of accidental hazards are predicted to be insignificant.

4.0 CONCLUSIONS:

The Air Force is currently conducting weapons delivery training on the Melrose Range and low altitude flight operations along low level route IR-107. The slight increase in noise and emissions due to the introduction of SAC aircraft are not significant.

From this, and a review of the EA, along with the public comments and our experience with similar past actions, I have concluded that this action will not have a significant impact on the environment. This Finding of No Significant Impact (FONSI) is based upon the minimal noise and air emissions increases, the minimal impacts to the human and natural environments, and the fact that SAC will limit their sorties to an average of 40 per week with minimum altitudes of 1500' AGL off range and 800' AGL on range. The Air Force, in this decision, and as documented in the EA, has employed, and will continue to use all practicable means to minimize the impact of this action on the local environment. The Air Force is committed to the policy of being a good neighbor and will continue to evaluate impacts caused by its operations as more conclusive data becomes available, particularly as regards noise effects of jet aircraft operations on humans, farm animals and wildlife. Should definitive data become available that reveals adverse impacts or potential effects may result, additional mitigation measures will be considered in consultation with the affected parties.

THOMAS L. LORD, Chairperson
Environmental Protection Committee Date_____

APPENDIX E

INFORMATION SOURCES

INFORMATION SOURCES

1.	Operational information.	a. AF 55 Series Manuals b. Base/MAJCOM/DEV c. Airspace Manager d. Air Traffic Control Officer e. Training Officer f. Plans Officer (XP) g. Base Operations (DO) h. Pilots i. FAA - ARTC j. Local Airport Managers k. AP/1A, Area Planning, Special Use Airspace l. AP/1B, Area Planning, MTRs
2.	Environmental regulations (Court opinions, laws, Executive Orders, etc.).	See Appendix F
3.	Intergovernmental coordination (names, addresses, phone number).	a. Environmental Technical Information Service (ETIS)--Interagency and Intergovernmental Coordination of land, Facility and Environmental Plans, Programs, and Projects 15 Sep 80. (IICEP) AFESC/DEV, Tyndall AFB, FL b. ICCEP. Interim Environmental Planning Bulletin 14, Vols 1 and 2, June 1978. c. IICEP. Interim Environmental Planning Bulletin 15, Volumes 1 and 2 June 1978.
4.	Environmental data.	a. ETIS b. Environmental Planning Bulletin 13, Volumes 1 and 2, Environmental Socioeconomic Data Sources. Tab A-1 Supplement, Aug 79. c. University Libraries
5.	Population.	a. Bureau of the Census b. US Department of Commerce c. Local/State Planning Agencies d. State Designated statistical agencies or bureaus
6.	Population density.	a. Local /State Planning agencies

7. Existing land use.	a. Local Planning Department b. United States Geological Survey (USGS) Maps c. Flight Information Publications (FLIPs) d. Coastal Zone Commissions e. Council of Governments and Regional Planning Agencies f. University Libraries
8. Proposed land use.	a. Zoning Maps/Master Plans b. Local Planning Department c. Coastal Zone Commission d. Announced Private Projects/ Local papers e. Chamber of Commerce Economic Development Agencies f. Council of Governments and Regional Planning Agencies g. University Libraries
9. School Location/Occupancy.	a. Local school administrators b. Local Planning Department
10. Wildlife.	a. State Department of Fish and Game or Forestry b. State/local Natural Resources Agency c. US Bureau of Land Management d. US Fish & Wildlife Service e. Conservation Directory, A list of Organizations, Agencies, and Officials concerned with Natural Resource Use and Management. The National Wildlife Federation, 12th & 16th St NW, Wash, DC. f. University Libraries
11. Domestic animals.	a. State Departments of Agriculture b. State Agricultural Extention Service c. US Bureau of Land Management d. US Fish and Wildlife Service e. University Libraries
12. Historic structures/sites.	a. National Register of Historic Places b. National Park Service c. Historical Societies d. University Anthropology Departments e. State Historic Preservation Offices (See Directory)
13. Topography	a. US Geological Survey Topograhic Maps - 7S series b. Local/State Planning Agencies c. Local/State Natural Resource Agencies d. State Roads or Transportation Departments

14.	Temperature and relative humidity conditions for noise calculations.	a. AAMRL Tech Report 76-116, "Further Sensitivity Studies Noise Calculation of Community--Aircraft Noise Exposture (NOISEMAP) Prediction Procedures "
15.	Threatened wildlife and endangered species of wildlife.	a. Office of Endangered Species, Fish and Wildlife Service, US Department of Interior, Wash, DC 20240. Phone: Comm, (202) 235-2771 b. Endangered and Threatened Wildlife and Plants 50 CFR 17.11 and 17.12 Reprinted Jan 1, 1982. US Dept of Interior. US Fish and Wildlife Service.
16.	Land/Ownership-Management.	a. USGC Maps b. Local/State Planning Agencies c. Local/State Federal Natural Resource Agencies d. Bureau of Indian Affairs e. US Department of Interior f. Bureau of Land Management (DOI) g. US Forest Service (DOI) h. US Fish and Wildlife National Park Service (DOI)
17.	Claims/complaints.	a. Base JA/PA b. Route Developer/Airspace Manager
18.	Noise Methodology/Calculations.	a. Air Force Aerospace Medical Research Laboratory (AAMRL/BB), Wright-Patterson AFB, OH 45433. AV: 785-3605 b. AFESC/DEV, Tyndall AFB, FL 32403. AV: 523-6227 c. OEHL/ECH Brooks AFB, TX 78235. AV: 240-3214
19.	Air Quality	a. AFESC Report, ESL-TR-85-14 Tyndall AFB, FL, 1985 b. EPA Report, EPA-450/4-77-001, 1977 c. Single Aircraft Instantaneous Line Source (SAILS) Dispersion Model. AFESC/RDVS, Tyndall AFB, FL AV: 523-4234 d. Multiple Aircraft Instantaneous Line Source (MAILS) Dispersion Model. AFESC/RDVS, Tyndall AFB, FL AV: 523-4234.

20. U.S.G.S. Maps

National Cartographic Information Centers (NCIC):

National Headquarters - US Geological Survey (USGS)

NCIC
7 National Center
Reston, VA 22092
703-860-6045

Western Mapping Center - U.S.G.S.

NCIC
345 Middlefield Road
Menlo Park, CA 94025
415-323-8211 ext 2427

Rocky Mountain Mapping Center - U.S.G.S.

NCIC
Box 25046, Stop 504-Federal Center
Denver, CO 80225
303-234-2326

Mid Continent Mapping Center - U.S.G.S.

NCIC
1400 Independence Road
Rolla, MO 65401
314-341-0851

National Space Technology Laboratories

NCIC
Bldg 1100
NSTL Station, MS 39529
601-688-3544

Eastern Mapping Center

NCIC
536 National Center
Reston, VA 22092
703-860-6336

APPENDIX F

SELECTED LIST OF ENVIRONMENTAL

REGULATIONS AND REQUIREMENTS

SELECTED LIST OF ENVIRONMENTAL

REGULATIONS AND REQUIREMENTS

1. Public Laws

P.L. 91-190 "National Environmental Policy Act of 1969"
P.L. 93-205 "Endangered Species Act of 1973"
P.L. 95-632 "Endangered Species Act Amendments of 1978"
P.L. 89-665 "National Historic Preservation Act of 1966"
P.L. 96-515 "The National Historic Preservation Act Amendments of 1980"
P.L. 90-557 "Intergovernmental Cooperation Act of 1968"
P.L. 90-542 "Wild and Scenic Rivers Act"
P.L. 88-577 "Wilderness Act of 1964"
P.L. 85-337 "Compliance with Federal and State Laws (Fish and Wildlife)"
P.L. 86-797 "Wildlife--Military Reservations"
P.L. 94-579 "The Federal Land Policy Management Act"
P.L. 92-535 "Fish and Wildlife Protection of Bald Eagle"
P.L. 92-574 "Noise Control Act of 1972"

2. Executive Orders

E.O. 11593, "Protection and Enhancement of Cultural Environment"
E.O. 11514, "Protection and Enhancement of Environmental Quality" 5 March 1970
E.O. 11991, "Relating to Protection and Enhancement of Environmental Quality" May 24, 1977

3. Air Force Regulations

AFR 19-1, "Pollution Abatement and Environmental Quality"
AFR 19-2, "Environmental Impact Analysis Process (EIAP)" 10 August 1982
AFR 19-3, "Environmental Impact Analysis Process (EIAP) Overseas" 23 Sep 81
AFR 19-9, "Interagency and Intergovernmental Coordination of Land, Facility and Environmental Plans, Programs, and Projects, 15 Sep 80
AFR 55-2, "Airspace Management" 1982
AFR 55-34, "Reducing Flight Disturbances" 1984
AFR 55-45, "Airfield Management and Base Operations" 31 May 79
AFR 86-14 "Airfield and Heliport Planning Criteria" 12 May 81
AFR 126-1, "Conservation and Management of Natural Resources" 2 April 1982
AFR 127-15 "The Bird/Aircraft Strike Hazard Reduction Program" 19 Oct 78
AFR 161-35, "Hazardous Noise Exposure" 9 April 1982

4. Air Force Manuals

AFM 19-10 "Planning in the Noise Environment" 15 June 1978
AFM 126-5 "Natural Resources--Outdoor Recreation and Cultural Values" Feb 1982

5. Federal Regulations

Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act November, 1978

36 CFR 800, "Procedures for the Protection of Historic and Cultural Properties" Jan 1989

FAA Aavisory Circular #91-36A, "VFR Flight Near Noise-Sensitive Areas" 9 July 1974.

6. DOD DIRECTIVES

DODD 5030.17 "Development and Use of Military Facilities affecting the Use of Airspace: Aug 24, 1960

DODD 5100 .50 "Protection and Enhancement of Environmental Quality" May 24, 1973

DODD 6050.1 "Environmental Considerations in DOD Actions" March 19, 1974

DODD 4165.61 "Intergovernmental Coordination of DOD Federal Development Programs and Activities" 9 Aug 83.

7. Air Force Policy Letters

Air Force Review of Wilderness Proposals, Ltr of 30 July 1980.

Wild and Scenic Rivers, AF/LEE Ltr of 21 July 1980.

Air Force Guidelines for Historic Preservation AF/LEE Ltr of 4 Jan 1982

8. Other Air Force Documents

IICEP, Interim Environmental Planning Bulletin 14., Vols 1 and 2, Jan 1970.

IICEP, Interim Environmental Planning Bulletin 15., Vols 1 and 2, Jan 1978.

AICUZ, Environmental Planning Bulletin 10., Vols 1 and 2, June 1979.

Environmental Planning Bulletin 13. Vols 1 and 2, Environmental Socioeconomic Data Sources, Tab A-1 Supplement. Headquarters USAF and US Department of Commerce, Bureau of the Census, Aug 1979.

APPENDIX G

DO'S AND DON'TS FOR CONDUCTING AIRSPACE ENVIRONMENTAL ASSESSMENTS

DOs

- Ensure DOPAA is complete, accurate, and addresses reasonable alternatives
- Focus analysis on affected attributes and controversial issues
- Use previously written EAs and EISs as much as possible, as sources of information
- Solicit inputs at the earliest possible moment from outside agencies. They can help focus the critical attributes and provide necessary background data on existing conditons
- Use an interdisciplinary team approach when writing an EA
- Seek assistance of MAJCOM, AFRCE, and HQ USAF/LEEV
- Remain objective
- Collect the most current data possible; the better the data, the better the analysis

DON'TS

- Never reinvent the wheel. Use established studies, standards and formats in developing and presenting your proposal

- Never allow a contractor (if one is hired to do the EIAP document) to talk to the news media about the proposal. Include a statement to this effect in your SOW, and give them your PA's telephone number.

- Never publicly release a draft EA. Air Force policy letter, dated _____ prohibits this.

- Never sacrifice quality of the EIAP document for meeting an unreasonable and unrealistic time frame. You'll end up doing the document over and paying the contractor more money and lose credibility from all fronts (the public, air staff, MAJCOM, etc.)

- Never hold a public meeting without being well organized and rehearsed. Even an informal information meeting should be well-organized.

- Never under-estimate the intelligence of your opposition/audience.

- Never be intentionally rude to the public, even when provoked.

- Never talk to the news media (newspaper reporters, radio people, TV people); let your PA folks handle the inquiries. PA, in turn, will ask you to supply them with answers to the media's inquiries.

- Never commit to any mitigation that you do not plan to implement or that you have no resources to follow through.

- Never ignore federal/state significant comments received during scoping/ IICEP. Follow through by acknowledging their concerns in some appropriate manner.

- Never allow yourself to be interviewed and taped by TV, radio, newspaper, personnel without your permission and without your being prepared. Make sure your get approval from PA and your supervisor.

- Never present a "cavalier" or uncaring attitude towards your opposition or concerned citizens, special interest groups, etc.

- Never patronize your opposition.

- Never provide to the public volumes of paperwork (EAs, research findings, environmental data) that will incur hours of work without a FOIA request. Tell them where to send their request (your FOIA office).